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***“I am trying to avoid busy supermarkets. So, this morning, I was at the supermarket at 8 AM already.”
Mr. Peeters, age 71***

A qualitative research about the adaptive behaviour and quality of life of independently living older adults in the Northern Netherlands during the COVID-19 outbreak.

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Abstract

Older adults (70+) are at higher risk of developing severe illness and mortality due to the latest coronavirus: COVID-19. In March 2020, the Dutch national government introduced Intelligent Lock Down (ILD) measures which emphasize social distancing and if possible, social isolation for older adults. These measures impact older adults' everyday life tremendously. Earlier research has shown that older adults can cope with changes in life by employing adaptation strategies. Adaptive behaviour in older age gives solutions to maintain, enhance, or improve quality of life. To understand how older adults deal with the pandemic, the research question of this study is: how do independently living older adults in the Northern Netherlands incorporate adaptation strategies in their everyday life to improve their quality of life during the Dutch ILD measures? A literature review has been conducted which is based on the adaptation model of Baltes & Baltes (1990), theories about everyday activities, and quality of life domains. To gain insight in individual experiences, a qualitative research approach has been applied. In total, seventeen older adults who live independently in the Northern Netherlands participated in in-depth interviews in April and May 2020. The ages of the participants range between 60 and 75 years. The study findings show that older adults are flexible, creative and have the ability to adapt in the COVID-19 situation because they employ a variety of adaptation strategies to battle social, environmental, and health challenges and maintain their quality of life. The adaptive behaviours of selection, optimization and compensation gave older adults the means to stay in control during the uncertain COVID-19 situation, to follow their own routines and to perform new or adapted meaningful activities. Older adults living alone and older adults with a lack of social and financial resources expressed a more negative quality of life. Therefore, older adults' individual characteristics and the availability of financial resources, social networks and alternatives provided by (health care) institutions are important to meet individual needs during the outbreak.

Key words: *COVID-19, older adults, everyday activities, adaptation strategies, quality of life*

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List of abbreviations

COVID-19	Most recently discovered coronavirus in December 2019 in Wuhan, China and which caused a global spread pandemic
ILD	Intelligent Lock Down
QOL	Quality of life
RIVM	The Dutch National Institute for Public Health and the Environment
WHO	World Health Organization

Chapter 1

Background

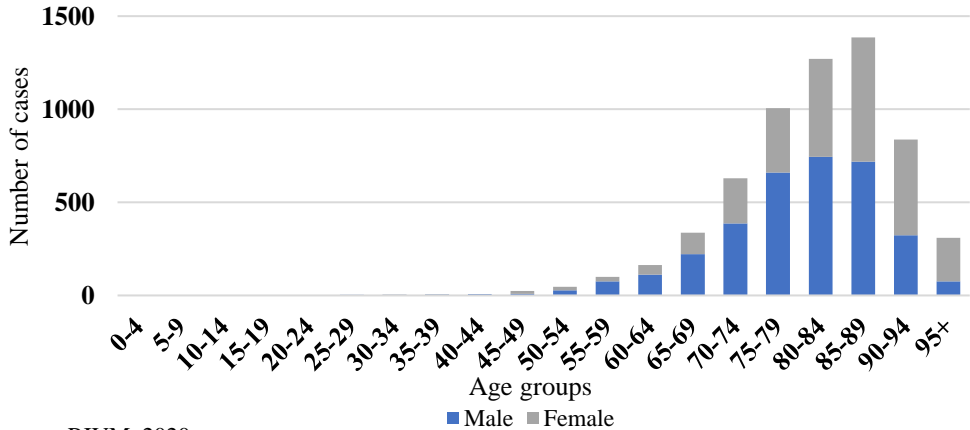
1.1 Introduction

Cases of pneumonia with an unknown cause were reported in December 2019 by Chinese health authorities in Wuhan City, Hubei Province of China (Ciotti et al., 2020). A new form of SARS-CoV-2 emerged named COVID-19. It is the most recently discovered severe acute respiratory syndrome (WHO, 2020). Three months later, on the 11th of March 2020, the epidemic had become a pandemic, according to the WHO. A pandemic is defined as the spread of a new virus on a global level (WHO, 2010). At that time 118,000 people were diagnosed with COVID-19 in 114 countries and 4,941 people lost their lives (WHO, 2020a). Six months later, on the 31st of August 2020, there were 25,118,689 confirmed cases of COVID-19 reported in the world, including 844,312 deaths (WHO, 2020b). These numbers show the enormous impact and rapid spread of the virus globally.

COVID-19 is a zoonotic disease, meaning that the pathogen is transmitted from animals to humans (Ciotti et al., 2020; Tang et al., 2020). The virus is part of the family of coronaviruses causing respiratory infections. Examples of other coronaviruses are the common cold, the Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (WHO, 2020). COVID-19 is spread from person to person and is highly contagious (Yan et al., 2020). People who are infected expel droplets from their nose or mouth by coughing, sneezing, or speaking. People catch the virus while they breath in these droplets. The most common symptoms of COVID-19 are fever, dry cough, and tiredness but the symptoms differ per person. The WHO states that 80% of the infected people with COVID-19 does not have to receive hospital treatment. Around 1 out of every 5 infected people becomes seriously ill and develops difficulty breathing. Currently, there is no legitimate vaccine to cure COVID-19 yet. At this moment antiviral treatment in combination with supportive care is the most successful treatment to treat an infected patient (Yan et al., 2020; Tan et al., 2020).

Everyone has a possibility to get seriously ill with COVID-19. Nevertheless, some population groups are at higher risk of developing severe illness and mortality. These groups are older adults, persons with pre-existing medical conditions such as high blood pressure, heart disease, lung disease, cancer, or diabetes and, especially, older adults with pre-existing medical conditions (WHO, 2020; Zaim et al., 2020). Like most European countries, the Netherlands is characterized by an ageing population. In 2019, 19% of the Dutch population falls into the age category 65 or above (Statistics Netherlands, 2019). The aging population indicates that a large share of the Dutch population is at a relatively high risk of developing severe COVID-19 symptoms. Figure 1 shows the total number of deaths by age group and sex until the 13th of July 2020 in the Netherlands. The figure reveals a concentration of the number of deaths in the higher ages, from the age of 55 to 95.

Figure 1 COVID-19 deaths in the Netherlands by age and sex



Source: RIVM, 2020

To prevent further spread of the coronavirus, minimize the burden on the health sector and protect vulnerable persons, countries worldwide have introduced measures to battle COVID-19, ranging from total isolation policies in Spain to soft policies in Sweden to keep society open. The Dutch national government introduced policies between these extremes.

On the 27th of February 2020, the first person with COVID-19 was confirmed in Tilburg, the Netherlands, and on March 15th and 16th the Dutch national government introduced Intelligent Lock Down measures – henceforth ILD measures (Government of the Netherlands, n.d.). Basic rules for everyone were established (Government of the Netherlands, n.d.- a). These are:

- Hygienic measures (wash your hands, sneeze and cough in your elbow, use paper tissues).
- Social distancing (stay 1,5 metres away from other people).
- Stay at home/ around home as much as possible (work from home if possible, do not use public transport if not necessary).
- Stay at home if you have cold-like symptoms (in case you have cold-like symptoms and fever, others in your household should stay at home too).
- Urgent advice for older adults (70+) and people with health issues to stay at home and avoid visits of people outside their household.

Besides these basic rules, schools, restaurants, cafes, sports clubs closed their doors until further notice. Moreover, nursing homes did not longer allow visitors. Meetings with other people outside the household were encouraged to stop or should be limited to three persons. At the 23rd of March 2020, the Dutch government announced that physical practitioners such as hairdressers and beauticians had to close their doors too (Rottinghuis, 2020). Initially the measures were planned to last until the 6th of April. Thereafter, they were extended twice: the first extension was until the 28th of April and the second was until the 20th of May. In May, the Dutch government had the virus more under control and they announced that some measures would be eased. From the 11th of May, primary schools and day care facilities reopened (at first part-time), physical practitioners could reopen their business, and outdoor exercises and -gatherings with ten people were allowed again. Children to the age of 18 could meet in larger groups and do sports again. Besides, the Dutch government announced a step-by-step reopening of society which was confirmed at May 20. From the first of June, restaurants, cafes, theatres, cinemas could reopen with a maximum of 30 guests. Next to that high schools, galleries and terraces could open their doors again. From the 15th of June nursing homes could receive visitors again, only one visitor per occupant. People are also obliged to wear masks in public transport. From the first of July the easing continued and people with unnecessary travel purposes could use public transport again, but this is still not encouraged. Wearing masks stayed obliged. Besides, gyms, canteens, casinos, and saunas could reopen their doors from 1 July. The ease of these restrictions was only possible by following the basic rules as mentioned earlier in combination with additional (local) measures, for example plexiglass screens on terraces and maximum amounts of visitors in stores (Government of the Netherlands, n.d.-a).

1.2 Problem statement

The Dutch ILD measures oblige social distancing and if possible social isolation for older adults since the 16th of March 2020 (Government of the Netherlands, n.d.). Health scientists underscore the devastating impact of social isolation for older adults both physically and emotionally. It is known that older adults in social isolation are at risk of becoming lonely, which can lead to depression, cognitive dysfunction, disability, cardiovascular disease, and mortality (Morley & Vellas, 2020; Berg-Weger & Morley, 2020; Santini et al., 2020). The lock down measures hinder the performance of everyday activities as they are more difficult to perform or even can be stopped due to the measures.

Nevertheless, alternative activities or other adaptations can offer solutions which can give new meanings and improve older adults' wellbeing in the COVID-19 crisis (Armitage & Nellum, 2020). For example, groceries and medicines can be delivered at home or family and friends can be met online through a video call. Such adaptations show an act of resilience. In literature, resilience in older adults' behaviour is acknowledged by many. The focus is on resilience and coping by age-related change, which is broadly defined as cognitive and physical degeneration. In 1990, Baltes & Baltes named it 'the adaptive capacity' of older adults. They explain the adaptive capacity along three

adaptation strategies: *selection*, *optimization*, and *compensation*. The implementation of these adaptation strategies can help older adults to deal with changes and losses to maintain a satisfying level of wellbeing and emotional balance (Baltes & Baltes, 1990; Baltes, 1997). However, the COVID-19 crisis and its subsequent national measures cause changes on a totally different level compared to age-related physical and mental degenerations. The crisis has a tremendous impact on society and especially upon older adults as they need to follow stricter rules to prevent contamination. To the best of my knowledge, no other research has given insight in the behavioural and cognitive strategies of older adults in such large-scale and top-down organized isolation measures in a period of huge uncertainty yet. Therefore, this research aims to gain new insights in the way older adults use adaptations strategies in everyday life to maintain a level of emotional balance and satisfaction during the COVID-19 crisis. The results of this study can inform municipalities, communities, and caregivers about mobility practices and experiences of older adults in a crisis situation where social isolation may occur. Furthermore, the study is important for national and regional governments in re-examining their introduced ILD measurements and its consequences on older adults' everyday life and quality of life.

1.3 Research questions

How do independently living older adults in the Northern Netherlands incorporate adaptation strategies in their everyday activities to improve their quality of life during the Dutch ILD measures in the COVID-19 outbreak?

1. How do older adults' everyday activities change during the ILD measures and COVID-19 outbreak?
2. How do older adults use adaptation strategies to deal with changes in their everyday activities?
3. How do older adults perceive their quality of life during the ILD measures and COVID-19 outbreak?

1.4 Structure

This thesis will continue with a theoretical framework explaining existing theories about adaptation strategies, everyday activities, and quality of life. A literature review is conducted to describe the relations between these three concepts and is followed by a conceptual model (chapter 2). Then, the chosen research design is discussed, explaining the study population and -setting, data collection and -analysis, and the corresponding ethical considerations (chapter 3). This is followed by the results section (chapter 4). Finally, conclusions are drawn and recommendations are given for further research (chapter 5).

Chapter 2

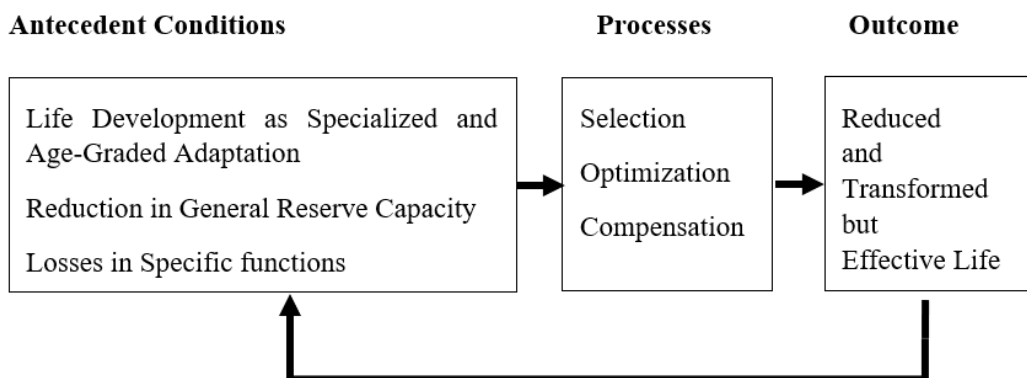
Theoretical framework

To understand the coping strategies of older adults during the COVID-19 crisis and the implemented ILD measures, it is important to get insight in the scientific theories and literature about adaptation strategies, everyday activities, and quality of life. First, the adaptation model of Baltes & Baltes (1990) will be described which is followed by conceptualizations of quality of life and everyday activities. Finally, a literature review is presented to show the dynamics known so far between these concepts.

2.1 The adaptation model

In 1990, Baltes & Baltes developed a theory of successful ageing as an adaptation process (Baltes & Baltes, 1990). In their theory, successful ageing means the individual's ability to shape own ageing process by using adaptation strategies to maintain, restore and/or enhance a certain level of wellbeing (Macroein et al., 2007). The individuals' adaptive potential is based on behavioural variability and plasticity, which involves a person's liability and adaptability to changes. Major changes in later life losses in physical and cognitive functioning due to genetic factors and the biological process (Santorini, 2006). According to Baltes & Baltes, older adults age successfully when they are able to cope with these losses by adaptation to have a transformed but effective life. These ongoing dynamics between antecedent age-related conditions, adaptation processes, and the outcome of a transformed but effective life is shown in figure 2.

Figure 2 The Selection, Optimization and Compensation model



Source: Baltes & Baltes, 1992 p.22

The adaptation model in figure 2 involves the adaptation processes of selection, optimization, and compensation (henceforth, SOC model). *Selection* encompasses two strategies as a response to reductions in functioning and enables older adults to prioritize between activities. Firstly, older adults can decide to no longer engage in the activity. This is also named loss-based selection. An example of loss-based selection is that a person stops the activity of going to gym classes because he or she cannot participate anymore due to physical complaints. The second selective strategy is named elective selection and entails the transforming of goals to continue to pursue the activity. An example of elective selection is the perseverance of going to the gym with physical complaints. Here, the person needs to change the goal of doing the same exercises as before the complaints and accept that he or she can do less strenuous exercises and take more breaks (Baltes & Baltes, 1990; Freund & Baltes, 1998). The second adaptive process is *optimization*. Optimization entails the augmentation and enrichment of existing reserves, resources, and functions (Baltes & Baltes, 1990). With optimization strategies, older adults can continue to perform activities without new means involved. Examples of optimization processes are acquiring new skills and/or resources (e.g. learning to use the telephone), time allocation (e.g. make more time to do the activity) and attentional focus (concentrate on specific activities or tasks) (Freund & Baltes, 1998). Finally, processes of *compensation* become operative when an

individual continues to perform their goals but now with new means to reach their goal (Baltes & Baltes, 1990). Older adults with mobility limitations can for instance substitute activities, or they can use assistive devices such as a wheelchair (e.g. Korotchenko & Clarke, 2016; Labbé et al, 2020).

The three adaptation strategies are discussed separately but they are not mutually exclusive and can be used in concert. An example of the use of two adaptation strategies is cited from Koon et al. (2020 p. 2): “consider a woman with long-term mobility disability who uses a manual wheelchair and is experiencing challenges with community mobility. She may employ selective strategies, such as prioritizing certain activities to minimize the number of times she must leave home. She may also use compensatory behaviours, such as using a portable ramp to access the homes of her friends who have entrances with stairs”. The woman in this example can prioritize the activity of meetings friends (selection) and at the same time use aids (compensation) to be able to perform this activity.

In the empirical study among community living older adults in Canada aged 65 and older, Rush et al. (2011) defined sub-adaptive behaviours within the SOC model. These sub-adaptive behaviours are the response on mobility limitations and outlined in table 1. Responses of the community living older within selection are the reduction of an activity and changing goals. *Reducing activity* is ranging from giving up and avoiding activities to activities which are performed less often, for a shorter or longer duration or over a more circumscribed space. *Changing goals* is defined as the modification, transformation, or redirection of goals. The first strategy within optimization is *pushing the self* to capacity or beyond. Pushing the self is often employed by activities which are seen as necessary, for example doing the laundry. *Balancing the tensions* is defined as the effort to get balance in pushing the self and not overdoing it, and between taking risks and preserving safety. Another strategy often mentioned is *anticipatory planning* and involves planning strategies to consolidate or spreading out activities. Older adults also *change environments* to deal with mobility challenges, for example going wintering in another place. Then, a subcategory of compensation is *substitution*. Older adults can substitute their movements by using alternative modes of transport. For example, going with the bus instead of walking due to a bad knee. *Modification* encompasses adjustments in situations that allow for continuity. An example are modifications in the home environment, e.g. grab bars in the toilet. *Receiving help* ranges from the acceptance of paid or unpaid help which is self-initiated or offered by others. Lastly, *using aids* or assistive devices can enhance mobility, for example a cane or wheelchair.

Table 1 Sub-adaptation strategies within the SOC model

Selection	Optimization	Compensation
Reducing activity Changing goals	Pushing self Balancing the tensions Anticipatory planning Changing environments	Substituting Modifying Receiving help Using aids

Source: Rush et al., 2011

It is expected that the SOC model in combination with the sub-adaptation strategies of Rush et al. (2011) is most useful to study responses of older adults towards changes in everyday life during the COVID-19 outbreak. The first reason is the general character of the SOC model which enables the implementation for various research goals and data collection methods. The SOC model is stated to be inherent for every developmental process or change across lifetime (Baltes & Graf, 1996; Baltes, 1997). Secondly, heterogeneity between older adults is acknowledged in the model because individual ageing trajectories are context- and person-conditioned (Baltes & Baltes, 1990; Baltes, 1997). Differences between older adults exist in biological, personal, intrapersonal, and environmental factors, such as financial resources and personal goals. Therefore, successes have different meanings per person, and they can change over time. A third reason to use the SOC model is its relevance today. After thirty years, the model is still used to study adaptation strategies in the old age. Besides, the model specified by empirically research to adaptations in everyday life activities by older adults (e.g. Baltes & Lang, 1997; Gignac et al, 2002, Koon et al., 2020). Finally, the SOC model is embedded in the concept of wellbeing which is stated to be essential to understand individual successes (Strawbridge et al. 2002; Baltes & Baltes, 1990). The model comprises “both the objective aspects of medical, psychological, and social functioning and the subjective aspects of life quality and life

meaning” (Baltes & Baltes, 1990 p.7). Subjective indicators include measurements of life satisfaction, self-concept, self-esteem, and perceived personal control. It comprises the perceived value judgement about one’s quality of life. On the other hand, there are the objective criteria as biological health, mental health, environmental characteristics, and resources. Baltes & Baltes embrace the motto of the Gerontological Society of America of 1955: “*adding life to years, not just more years to life*” (in Baltes & Baltes, 1990 p.5).

2.2 Quality of life

Understanding how people evaluate their lives and when it is considered to be worth living, is studied both qualitatively and quantitatively in research disciplines as gerontology, economics, psychology, health studies, sociology, and human geography (Douma et al., 2017; Schwanen & Ziegler, 2011). Methodology varies from objective macro-level measurements across nations and populations to subjective individual indicators. As the research field is so diverse, the definition of quality of life among different studies is heterogeneous (Boggatz, 2016; Nordbakke & Schwanen, 2011) and creates often conceptual confusion with the related concepts of ‘wellbeing’, the ‘good life’, and ‘happiness’ (Bowling & Windsor, 2001).

Despite the heterogeneity in definitions, Boggatz (2016) aimed to create a definition specifically for quality of life in old age. He draws upon the definition from the WHOQOL Group, who stated that quality of life is the “*individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns*” (WHOQOL Group, 1995 p. 1405). The definition acknowledges the subjective and multi-dimensional nature of the concept quality of life as it focusses on the individual’s perception which is embedded in a specific cultural, social, and environmental context. By incorporating the age-related losses which is characterizing for the aging process, Boggatz (2016 p.61) specified the definition as “*a subjective state characterised by the attributes life satisfaction and emotional balance which mirror the satisfaction of underlying needs and are kept stable by adaptation to worsening life conditions*”. Corresponding with the theory of Baltes & Baltes, the definition of quality of life in old age includes the adaptive capacities to maintain life satisfaction which shows the dynamic and interrelationship between the concepts.

To study quality of life, researchers often define multiple domains to understand individual perceptions. The WHOQOL group made a cross-culturally and international recognized quality of life questionnaire (Skevington et al, 2004). Table 2 shows the six quality of life domains with their corresponding facets (WHO, 1998). Similar domains are found by researchers who tried to conceptualize older adults’ own understandings of wellbeing and quality of life. For example, Bowling & Gabriel (2007) showed attributes mentioned by British older adults (65+) that gave their life quality. Firstly, *social relationships* (partner, family, friends) are important for access to companionship, intimacy, love, and social contact. Then, *activities* performed with others (e.g. local events, clubs and group contact, helping others) were important, together with activities enjoyed alone (e.g. exercising, gardening, and leisure activities as playing music, reading or watching television). By doing activities, older adults experienced a sense of pleasure and it gave them the opportunity to be engaged in the community and to stay physical and mentally active. *Health* was an important theme to feel empowered in life, to experience a lack of restrictions and to have the ability to do the things they want to do. Besides, the *psychological outlook* by having a positive attitude was important to experience a sense of wellbeing, satisfaction with and acceptance of life. That goes with feelings of being lucky compared to others and being free from stress and loneliness. The *home and the neighbourhood* are another theme which gave them a feeling of pleasure, the ability to be connected with friends and family for social contact and to access local amenities and transportation. The feeling of safety and security in the home and neighbourhood contribute positively to older adults’ quality of life. Furthermore, *financial resources* are important to afford leisure activities, shopping, and luxuries for pleasure, as well as house repairs, upkeep, and bills. Having adequate financial resources gave older adults the feeling of empowerment and security for the future. The last theme is *independence*. Here older adults enjoy the ability to get out and maintain social contacts and do activities. Other studies found that independence gives older adults a sense of self and the subjective experience of

choice, social usefulness, and autonomy (Franke et al, 2019; Schwanen & Ziegler, 2011; Ziegler & Schwanen, 2011). Douma et al. (2017) studied the understanding of QOL among a heterogeneous group of older adults (65+) living in the Northern Netherlands. Similar themes are found compared to the study of Bowling & Gabriel (2007). Their participants mentioned social life, activities, health, space, and place as most important domains.

Table 2 Quality of Life Domains and their facets

QOL Domains	Facets
Physical	Pain and discomfort Energy and fatigue Sleep and rest
Psychological	Positive feelings Thinking, learning, memory, and concentration Self-esteem Body image and appearance Negative feelings Spirituality, religion, personal beliefs
Level of independence	Mobility Activities of daily living Dependence on medication or treatments Working capacity
Social relationships	Personal relationships Social support Sexual activity
Environment	Physical safety and security Home environment Financial resources Health and social care: availability and quality Opportunities for acquiring new information and skills Participation in and opportunities for recreation and leisure Physical environment (pollution, noise, traffic, climate) Transport
Spirituality/ religion/ personal beliefs	Spirituality/ religion/ personal beliefs

Source: WHO, 1998 p.11

Because of the overlap between the findings of lay-view studies about quality of life in old age and the internationally recognized WHO quality of life domains, the WHO domains are used to understand the perceived quality of life of the participants in this study.

2.3 Physical functioning indexes

The performance of activities in everyday life, part of the QOL physical health domain and independence domain, touches upon existing theories and assessments of physical functioning. Functioning is defined as *“the relative ease in the performance of tasks that are necessary for independence and mobility in everyday life. Functioning ranges from individual tasks associated with the performance of ease in lifting, to more complicated tasks associated with the performance of social roles.”* (Santorini, 2006 p. 130). Santorini states here that physical functioning facilitates independence and mobility. However, it can also go the other way around as mobility enables the individual to perform activities and to transcend different life spaces (Peel et al., 2005; Webber et al., 2010). These dynamics of functioning and movements come together in the understanding that mobility is an embodied experience (Ziegler & Schwanen, 2011). Furthermore, person- and context-specific characteristics are important, especially when older adults further go outward the home environment. These are physical, cognitive, psychosocial, environmental, and financial factors (Webber et al., 2010). For example, older adults need more financial resources to be able to go on a

holiday in a foreign country or older adults need more physical abilities to walk larger rounds. Metz (2000) defined reasons for meaningful movements as the 1) travel to achieve access to desired people and places, 2) psychological benefits of movement – of “getting out and about”, 3) exercise benefits, 4) involvement in the local community, and 5) potential travel (motility). Such movements can be the result of a bodily movement, with or without the use of aids, travels by vehicles (Webber et al., 2010) or virtually with the use of technology (Ziegler & Schwanen, 2011).

Physical functioning assessments are mainly used by healthcare professionals and researchers to examine the difficulties individuals or population groups experience with the performance of daily activities. These people often have disabilities or impairments, or they are at an older age. The aim is to understand the need for care or assistance to facilitate independent living (Ziegler & Schwanen, 2011; Santorini, 2006). Most well-known physical functioning assessments are the Index of Activities of Daily Living (Katz et al., 1963) and the Index of Instrumental Activities of Daily Living (Lawton & Brody, 1969). *Activities of Daily Living* (ADL) are activities to assess self-reliance, including bathing, dressing, toileting, transferring, continence and feeding (Katz et al., 1963). More complex cognitive and physical activities are categorized by the *Instrumental Activities of Daily Living* (IADL), which are necessary for living independently in a community (Ferrucci et al., 2008). IADL tasks include multiple capacities, such as cognitive- and physical abilities, and they have access to personal- and social resources. An addition to the two scales is made by Rogers et al. (1998). They labelled Enhanced Activities of Daily Living (EADL) to all transcending activities which do not fit in the ADL and IADL indexes. In these higher-level activities, independently living older adults spent a large proportion of their time (Rogers et al., 1998) including hobbies, leisure activities, exercising and attending events (Koon et al., 2020). As the participants of this study are still living independently and the ADL activities are not directly influenced by the lock down measures, the focus of this study is on IADL and EADL activities summarized in table 3.

Table 3 Instrumental Activities of Daily Living and Enhanced Activities of Daily Living

Instrumental activities of daily living (IADL)	Enhanced activities of daily living (EADL)
<i>Live independently in a community</i>	<i>Additional activities</i>
Ability to use telephone	Performing hobbies
Shopping	Exercising
Food preparation	Attending events
Housekeeping	Leisure activities
Laundry	
Mode of transportation	
Responsibility for own medication	
Ability to handle finances	
Home maintenance	

Sources: Lawton & Brody, 1969, Santorino, 2006, Rogers et al. 1998 & Koon et al., 2020

2.4 Literature review

2.4.1 Everyday activities, adaptations, and wellbeing in later life

The SOC model has been used by multiple researchers to analyse older adults’ adaptations in everyday activities and their perceived quality of life. Studies range from adaptation strategies of older adults in their daily activities (Siren & Hakamies-Blomqvist, 2009; Rush et al., 2011) and home maintenance tasks (Kelly et al., 2014) to adaptations in driving behaviour (Pickard et al., 2009). Older adults with different characteristics in health status are studied: older adults with Osteoarthritis (Gignac et al., 2002; Janke et al., 2009), community living older adults (Rush et al., 2011) and older adults with long term mobility disabilities (Remillard et al., 2019; Koon et al., 2020). Most mentioned challenge that older adults needed to overcome with adaptive behaviour are physical challenges impacting mobility (Siren & Havamies-Blomqvist, 2009; Gignac et al., 2002; Rush et al., 2011; Koon et al., 2020; Janke et al., 2009).

When comparing the studies, creativity, resilience, and plasticity in the behaviours of older adults has been found to circumvent or minimize difficulties in functioning. Almost all older adults in the studies used at least one adaptation strategy (Rush et al., 2011; Gignac et al., 2002; Koon et al., 2020). Mostly, older adults reported all three types of adaptation: selection, optimization, and compensation. These strategies were often used together (Rush et al., 2011; Gignac et al., 2002; Koon et al., 2020) and moderate relationships were found between the three strategies (Gignac et al., 2002). Moreover, the studies emphasize that older adults adapt in numerous ways to difficulties in functioning. Many factors contribute to these differences. Gignac et al. (2002) found the factors of age, social resources, sense of helplessness, perceptions of changed capacity or goals, and perceptions of independence/dependence. Almost similar factors are found by Rush et al. (2011), which are described as mobility goals, physical limitations, sense of safety and security, other people, physical environment, and desire for control and independence. Also, between the studies adaptation strategies were not reported in equal frequencies. For example, Gignac et al. (2002) found a majority of *compensational* strategies among their participants with Osteoarthritis. Reasons for this high frequency of compensational strategies are the great availability of compensational strategies, the limited ability to enlarge reserves using optimization strategies as planning, and the limited degree in which necessary daily activities (ADL) can be reduced by selective strategies. In contrast, Rush et al. (2011) found a majority of *optimization* strategies mentioned by community living older adults. They explain this by the high degree of healthy participants which allowed them to maintain continuity by pushing themselves, and by planning and balancing activities.

Studies found positive and negative associations with the employment of adaptation strategies. Gignac et al. (2002) found that older adults with Osteoarthritis did not perceive loss in social resources or greater perceived helplessness by using *compensational* strategies as they were able to continue performing everyday activities. This is in line with the study of Siren & Hakamies-Blomqvist (2009) who found that compensational strategies are used to maintain the self during the ageing process and is not associated with the classification of 'being old'. Contradictory are the findings of Rush et al. (2011). They show that compensational strategies of receiving help and using aids were often negatively associated with ageing by the participants. *Optimization* strategies also enable to continue performing everyday activities, in which planning and spending more time and/or effort avoid difficulties before they happen (Gignac et al. 2002). Janke et al. (2009) found that all adaptation strategies in leisure-based activities, except for loss-based selection, are related with positive health outcomes. *Loss based selection*, where activities were stopped, was associated with more pain, anxiety, and difficulties with overall health. Besides, selective adaptations were less preferred in other studies as they limit or reduce the amount activities performed (Gignac et al., 2002; Koon et al., 2020). But selection was necessary when older adults' illness was more severe, when there was a lack of social resources or unavailability of others to help, and when they had the feeling of being helpless or feel unable to manage the condition (Gignac et al., 2002). Older adults' often let go of leisure and recreational activities first because they were perceived as less essential to hold on to (Rush et al., 2011). Even though resistance is found for the reduction in activities, having the feeling of continuity and autonomy in everyday life is more important. The continuation of everyday activities in the home and community contributes to the ability to age-in-place, maintain functional independence, and support quality of life (Koon et al., 2020). It is found that changes in everyday activities do affect personal lifestyles and patterns because meaningful activities are liked with a sense of self. But adaptation gives older adults the possibility to maintain, achieve and manifest autonomy (Siren & Blomqvist, 2009). Hence, adaptation enables older adults to stay active agents in their own life despite the reductions in mobility and functioning.

The studies discussed above show a complex connection between everyday functioning, adaptation, and perceived quality of life due to environmental, social, and personal factors. Reductions in functioning can influence wellbeing as meaningful everyday activities are related to a sense of self, the feeling of autonomy and independence. Everyday activities are part of a person's identity and personal lifestyle which can be threatened by functional degenerations. But the research findings show that adaptation strategies contribute positively to older adults' quality of life because they enable the continuance of everyday activities - in a different way.

2.4.2 Older adults in lock down

Only a few publications about the possible effects of COVID-19 lock down measures and the adaptive behaviours of older adults are published yet. It is important to interpret the literature in this chapter within its own time frame since more extensive publications are likely to follow in the near future.

Health researchers are stressing the possible negative physical- and mental effects of confinement and physical- and social distancing by older adults. Especially by community-dwelling older adults and frail older adults these negative health outcomes can be exacerbated (Brooks et al., 2020). Scientists warn for a sedentary lifestyle by older adults that reduces physical activity (Moro & Paoli, 2020; Aubertin-Leuheure & Roland, 2020). A reduction in physical activity implies a decline in skeletal muscles which is associated with negative health impacts including the increased risk for cardiovascular disease, musculoskeletal disorders, cognitive decline, and an increase of overall mortality. Besides physical activity, the quarantine measures also impact older adults emotionally due to the separation from loved ones, the loss of freedom, uncertainty, and boredom which can result in post-traumatic stress symptoms, confusion, and anger (Brooks et al., 2020). Furthermore, older adults in social isolation are at risk of becoming lonely which is associated with depression, cognitive dysfunction, disability, cardiovascular disease, and mortality (Morley & Vellas, 2020; Berg-Weger & Morley, 2020; Santiani et al., 2020). Bowling & Gabriel (2007) found that social relationships are of great importance in the old age for closeness or intimacy, companionship and social contact which contributes to older adults' self-esteem, feeling valued and loved, pleasure and enjoyment of life, and feeling secure. Whereas above mentioned effects can have long term complications, voluntary quarantine is found to be less stressful and is associated with fewer long-lasting effects (Brooks et al., 2020).

Some solutions to combat physical and mental health challenges during the COVID-19 outbreak are given. In the first place, simple and adapted physical activities in the home environment are advised including strength, balance, and walk exercises (Aubertin-Leuheure & Rolland, 2020) together with good nutrition (Moro & Paoli, 2020). Furthermore, telehealth programs are encouraged by scientist to perform both physical and memory exercises at home (Middleton et al., 2020; Goodman-Casanova et al., 2020). Moreover, digital technology as apps can enhance wellbeing and improve social connectedness (Banskota et al., 2020). Lastly, the information provision by public health organizations are important for older adults to understand the current situation (Brooks et al., 2020).

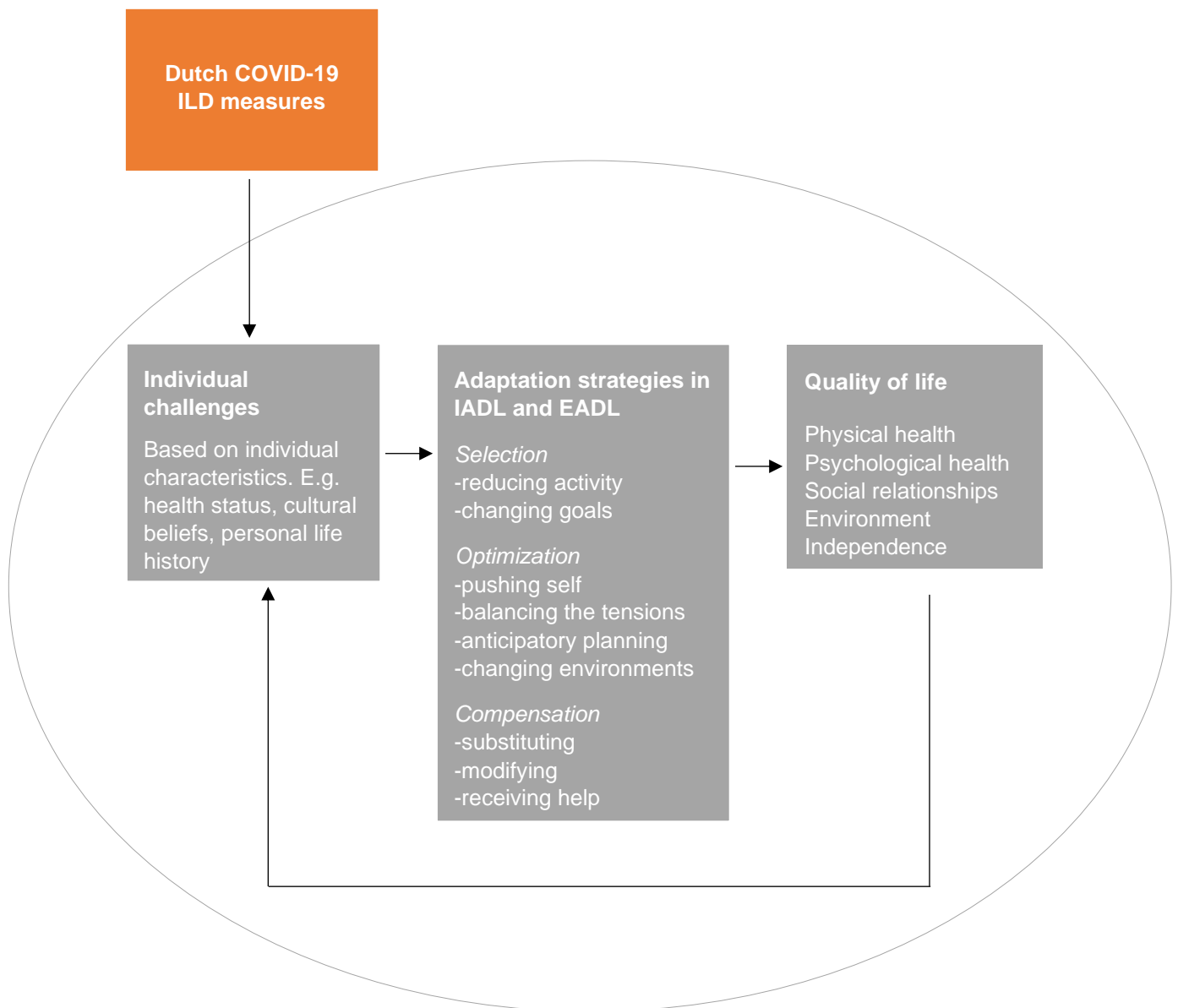
Goodman-Casanova et al. (2020) already studied the impact of confinement during the COVID-19 situation on the health and well-being of community-dwelling older adults with cognitive impairment or mild dementia. Here, Goodman-Casanova et al. (2020) show the time-spent and purposes of activities in daily life during the pandemic. The participants perceived optimal physical and mental health and wellbeing during the lock down measures. However, more negative psychological effects and sleeping problems were experienced by participants who were living alone. Older adults adopted behaviours to deal with the confinement, included keeping informed about the situation, accessing health and social services, having a support network that prevents risk of exposure to COVID-19 and guarantees food and medical supplies, a daily routine with maintained sleeping habits and leisure activities, staying physically and mentally active with cognitive stimulation exercises, and ensuring social connectedness using technology.

In short, these studies are suggesting physical and mental health challenges for older adults during the COVID-19 lock down measures. Furthermore, older adults can experience the measures differently due to their own position concerning the measures (e.g. voluntary quarantine or obliged) and individual characteristics (e.g. living alone or with a partner). The study of Goodman-Casanova et al. (2020) shows that many older adults changed their daily activities and routines during the lock down underscoring the relevance for this study.

2.4 Conceptual model

Figure 3 visualizes the conceptual model of this study based on theories about physical functioning (Katz et al., 1963; Lawton & Brody, 1969; Rogers et al. 1998; Koon et al., 2020), quality of life (WHOQOL group, 1995) and adaptation strategies (Baltes & Baltes, 1990; Rush et al., 2011). The conceptual model has, compared to the SOC model of Baltes & Baltes (1990), an additional external factor: the Dutch ILD measures. The measures are expected to influence the individual's everyday life. The impact of these measures depends on individual and contextual factors. To maintain quality of life, older adults may use adaptation strategies. The circle surrounding the conceptual model represents the geographical context of the Northern Netherlands, the study area in this research.

Figure 3 Conceptual model



Source: author

Chapter 3

Research methodology

3.1 Type of research

The aim of this research is to explore the process of change and adaptation in mobility patterns and experiences during the COVID-19 outbreak and ILD measures in the Netherlands. Because of this aim, this study fits in an exploratory qualitative research paradigm. The qualitative approach enables to gather information about personal perspective experiences in detail (Hennink et al., 2011). The exploration in research is relevant by little or no scientific knowledge present about the subject of study (Stebbins, 2001), which is the case for the changing mobility of older adults during the COVID-19 pandemic because professionals have only speculated about potential impacts.

The paradigm of this study is interpretative as subjective experiences are analysed (Hennink et al., 2011). From this paradigm, an emic perspective is adopted to understand mobility experiences and the subjective meanings attached to them. By implementing this approach, Hennink et al. (2011) state, the wider social, cultural historical and personal context of the individual is acknowledged. This is important as the broader contexts shape the subjective and socially constructed reality in which the participants of the study live. Therefore, not one reality is acknowledged but there are many subjective realities present during the COVID-19 outbreak.

3.2 Study population

This study is performed within the EU funded research project '*Meaningful Mobility: A novel approach to movement within and between places in later life*' initiated by prof. dr. L.B. Meijering. The research method contains of follow-up interviews with participants who already had been included in the Meaningful Mobility project.

The Meaningful Mobility project started in April 2019 with the aim to explain mobility practices and experiences by older adults in relation to well-being. The research is conducted in three socio-cultural contexts (the Netherlands, the United Kingdom and India) and specified to three categories of independently living older adults aged 65 (healthy older adults, older adults with early stage Alzheimer's, and older stroke survivors).

The Dutch participants were recruited in the Northern Netherlands, in the provinces Friesland, Groningen, Drenthe and the north of Overijssel. For eight days, the participants wore a GPS-tracker and a pedometer and wrote their daily activities down in an activity diary. The generated data were subsequently discussed in an in-depth interview in autumn and winter of 2019/2020. A second-round data collection was planned in spring and summer 2020 but was cancelled because of the COVID-19 pandemic.

At the time of the COVID-19 outbreak, already eighteen participants from the Netherlands had joined the project. No saturation had taken place in the three different categories of older adults yet. Thirteen participants were categorised as healthy, three participants have experienced a stroke and two have early stage dementia.

3.3 Participant recruitment

The recruitment strategy, to contact the participants of the Meaningful Mobility project, existed out of two steps. The first step was to send an email to participants. This email was addressed by both prof. dr. Meijering and me as Master student doing a research within the overall Meaningful Mobility project. The participants were asked whether they would like to have an interview about mobility practices and experiences during the ILD measures. Through previous data collection, it was known that not every participant is familiar with email or the computer. Therefore, the mail informed them that they would be contacted via a phone call the same or next week – the second step of the participant recruitment strategy. By doing so, participants who did not read the email or who had questions about the research could be fully informed by phone. If a participant was willing to engage

in a follow-up interview, an appointment was made during the phone call. All 18 participants were willing to do an interview. However, I was able to make an appointment with 17 of the participants. Tables 4 and 5 show the information about the interviewees. Table 4 shows the participant information in numbers. Table 5 shows additional participant information together with the sequence in which the interviews were conducted in April and May 2020. The colours in the table show the prevailing ILD measures at the time of the interview. Since the interviews were conducted over a period of five weeks, some ILD measures were changed or eased over time.

Table 4 Participant characteristics in numbers (N)

Characteristics	N
Gender	
Male	10
Female	7
Age group	
60-64	5
65-69	5
70-75	7
Marital status	
Single	1
Married	13
Widowed	3
Revenue streams	
Work	3
Compensation	2
Pension	12
Living arrangement	
Alone	5
With other(s)	12
Type of house	
Flat/apartment	4
Terraced house	4
Semi-detached house	2
Detached house	7
Degree of urbanisation*	
(1) Extremely urbanized	4
(2) Strongly urbanized	1
(3) Moderately urbanized	2
(4) Hardly urbanized	2
(5) Not urbanized	8
Receiving help with	
Cleaning/housekeeping	4
None	13
Mobility aids	
Walker	2
None	15

Notes: * Based on the surrounding address density per square km (Statistics Netherlands, 2019a)

Source: the Meaningful Mobility Project

Table 5 Interview sequence and additional participant information

ILD measures during the interview period	Pseudonym	Gender	Age	Category
Experienced strict measures until the 21 st of April (e.g. stay home when possible, keep 1,5 metres distance of other people, stay at home if you have cold-like symptoms, do not visit people with the age of 70 and older except when they have a limited support network, visits to care homes are prohibited, restaurants/bars/cafés are closed, only go outside to take some fresh air and stay near the home by walking or using the bicycle.	Mr. Kraima	Male	70	Healthy
	Mr. Kuipers	Male	62	Healthy
	Mr. Pakvis	Male	75	Dementia
	Mr. Takens	Male	75	Healthy
	Mevr. Scholten	Female	67	Stroke
	Mr. de Ruiter	Male	68	Healthy
	Mr. Mol	Male	63	Healthy
Experienced the extension of above-mentioned measures until the 6 th of May.	Mr. Peeters	Male	71	Healthy
	Mr. Willems	Male	67	Healthy
	Mevr. Frootik	Female	72	Healthy
	Mevr. van Wijk	Female	65	Stroke
Experiencing some relaxation in the measures (e.g. children again to school, going to the hairdresser and physiotherapist again). Besides, they had knowledge of possible opening of restaurants, bars, film houses planned in June.	Mr. de Graaf	Male	65	Healthy
	Mevr. Pietersen	Female	75	Stroke
	Mevr. Roelofs	Female	64	Healthy
	Mevr. Gerritsen	Female	75	Healthy
	Mr. Koster	Male	61	Healthy
Had knowledge of the official relaxation of the restaurants/bars/cafes and cultural sector at the 1 st of June.	Mevr. Blom	Female	60	Healthy

Source: the Meaningful Mobility Project

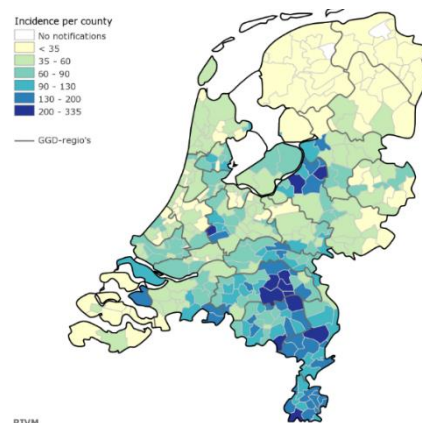
3.4 Study setting

The research took place in the Northern Netherlands. Participants live in the provinces of Friesland, Groningen, Drenthe, and the north of Overijssel. In these provinces less patients are diagnosed with COVID-19 compared to the middle and southern provinces of the Netherlands, illustrated by figure 4 (RIVM, 2020a, RIVM, 2020b). The difference in incidence may result in different experiences of older adults living in the Northern Netherlands compared to older adults living in the more southern parts of the Netherlands. This because older adults in the Northern Netherlands may not perceive a direct threat of the virus.

3.5 Data collection

In-depth follow up interviews enabled me to capture personal experiences and “*individual voices and stories*”, which fit into the adopted qualitative research approach (Hennink et al., 2010 p. 110). The interviews have been collected following a semi-structured interview guideline based on the research questions, theories, and conceptual framework. The semi-structured design of the guideline enables a one-way conversation in which the interviewee can denote issues they find important according to the themes raised by the interviewer (Longhurst, 2010; Hennink et al., 2011). To motivate participants to tell their story, questions are asked in an open and empathic way (Hennink et al., 2010). Besides, the asked questions did not follow the listed order of the interview guide (Longhurst, 2010). The guide existed of five themes: 1) Experiences with COVID-19 and ILD measures; 2) Everyday activities during measures; 3) Mobility adaptation strategies; 4) Social contact; and 5) Quality of life (see appendix 1: Interview Guide).

Figure 4 Total number of hospitalized patients with COVID-19 in the Netherlands



Source: RIVM, 2020a p.14

Each theme is divided into primary open questions and additional topical probes. The probing questions encourage the participant to elaborate on the primary questions (Hennink et al., 2011). Sometimes, specific individual probing questions were added because I had information about their everyday activities in the pre-COVID-19 situation. For example, I could ask a participant who stated playing soccer in the previous interviews in the winter of 2019/2020, how this situation altered during the outbreak when this issue was not mentioned while discussing the everyday activities.

The interviews have been conducted in Dutch by telephone and lasted between 26 minutes and 76 minutes. Participants were eager to share their experiences about their situation during the virus outbreak with me. I tried to be an active attendee of the conversation during the interview by reacting directly to the stories of the participants, and sometimes summarize their statements to check if I correctly interpreted it. Doing the interviews by telephone made it difficult for me to figure out how important off-topic statements were to them since I was not aware of the participants' body language and facial expressions. In these cases, I let the participants finish their stories to be sure all information was captured. During the interviews, participants were in their own home, which is seen as a safe place where people feel at ease and talk freely (Hennink et al., 2011). In two cases, a participant's partner was nearby and were listening to the conversation and sometimes took part of it. For example, the partner of Mr. Takens reminded him that he forgot to talk about choir which is a weekly activity for them. Not being aware of facial- and bodily expressions, and not being in control about the people presence, are barriers of telephone interviewing. However, it is argued that telephone interviewing is a productive and valid research option (Stephens, 2007; Holt, 2010). A benefit of telephone interviewing is the reduced power relations between the interviewer and interviewee because the interviewer is not physically present. The interviewee could better control his or her social space and privacy during the conversation (Holt, 2010). Therefore, telephone interviewing has been an effective method to reach older adults in the lock down situation, especially because they were already familiar with the project.

Saturation occurred around the 14th interview. The principle of saturation, introduced by Glaser and Strauss (1967; in Hennink et al., 2011), means that a point is reached in the data collection where no additional data is gained. The three interviews after the 14th interview confirmed my idea of saturation as the data was largely repeating itself within the broad themes. The different phases in the lock down measures may have influenced the perception of the participants towards the future (see table 5). This may have resulted in negative feelings by extensions of the measures, and in feelings of hope and positivity when measures are eased.

3.6 Data analysis

The interviews have been recorded by a digital voice recorder and transcribed verbatim. Verbatim data transcription enabled me to capture the participants' own words and emotions which is important to understand cultural meanings (Hennink et al., 2011). An informed grounded theory approach is which means that pre-existing theories and research findings were used as lenses and tools to focus on certain phenomena or aspects within the data (Thornberg, 2012). In this way, I was informed about relevant theories, without exactly adhering to them, and had an open empirical attitude towards the data. Thornberg argued that the informed grounded theory approach enables researchers to extend, challenge, refine or revise current literature about specific topics. Hence, the approach is an effective way to extend and refine adaptation strategies specifically for older adults during a lock down.

The interviews are imported and coded in the software program ATLAS.ti. The theoretical framework of this study (existing of IADL and EADL, sub-adaptation strategies by Rush et al. (2011) and the QOL domains) laid the foundation for the deductive codes and were used flexible with inductively and in-vivo codes. This inductive and in-vivo coding is part of the open coding strategy which enabled me to capture new concepts and themes raised by participants. During the data analysis, I went back and forth between data and literature to understand the emerging themes within existing literature (Hennink et al., 2011) and to be informed about newly published research findings concerning older adults in the COVID-19 outbreak.

To interpret the data, codes with similar meanings were grouped and merged together. Thereafter, a cross-case comparison of codes has been done which is often employed in research to identify the

variety of experiences of a single topic (Hennink et al., 2011). I used the analytic tools ‘co-occurrence tables’ and ‘code-document tables’ in ATLAS.ti to make comparison of codes within the interviews, between the interviews and between document groups. In the document groups, interviews were clustered along age groups, living arrangements, type of house, health status (healthy, dementia or stroke survivor), and degree of urbanization. In this way, the variety of adaptation strategies and associated feelings/experiences could be identified per everyday activity and per participant. The codebook in appendix 2 shows the central codes with their interpretations.

Most changes and adaptation strategies during the lock down could be immediately discovered from the interviews. Sometimes, changes were only mentioned indirectly, or they were not elaborated on. To be sure of these findings, I checked the activity diaries and interviews of the participants from winter 2019/2020. For example, I could compare the amount of times a participant was doing a specific activity before the outbreak and during the outbreak when the participant had not mentioned the extend in which the activity changed during the outbreak. I have included such information in notes to the relevant quotations in ATLAS.ti.

3.7 Ethical considerations

For this research, the norms of the Belmont Report were followed (National Commission for the Protection of Human Subjects of Research, 1979). The three principles in this report are core elements for the ethical conduct of research. These principles are: 1) respect of persons, 2) beneficence, and 3) justice. Respect of persons in the research entails that the welfare of the participants is the most relevant aspect. This entails that the participants should be treated with respect and should voluntarily join the study with adequate information. Beneficence means that the potential risk for the participants should be minimized and that the researcher should strive to maximize the benefits for society and participants. Then, justice refers to the research design which should be carried out in a fair, non-exploitative, and well-considered manner (Hennink et al., 2011). Taking these principles into account multiple considerations in participant recruitment, data collection and data analysis were made. Important considerations to take into account according to Hennink et al. (2011) include informed consent, self-determination, minimization of harm, anonymity, and confidentiality.

During the participant recruitment and data collection, respect for persons is linked to doing justice to the participants involved. To ensure respect and justice, the participants were informed three times about the research: in the first and second step of the recruitment strategy and in the introduction of the interview. During these moments of contact, participants were asked if they had questions about the research.

Another consideration to ensure respect and justice was that participants were asked twice for an oral consent. In this way, I could check whether the participants indeed engaged in own will. The first time I asked for consent was during the telephone call to make an appointment for the interview, the second time I asked for consent was right after the introduction of the interview. The informed consent has been conducted orally because the participants had already signed the informed consent of the overall Meaningful Mobility project. Even though all participants said yes to the oral consent, I asked them if they wanted to receive the signed consent again and gave them the opportunity to go through it again before the start of the interview.

Furthermore, I have emphasized in the introduction of the interview that participants do not have to answer questions if they are not willing to or when they do not have an answer. Before and after the interview there was room for establishing rapport between the participants and me as researcher, with the reason to ease the tensions which encourages the participants to speak freely. At the end of the interview, all participants were asked if they would like to receive the research outcomes in the form of the master thesis and/or a summary in Dutch. This is part of doing justice to the participants and divide the research benefits among the stakeholders.

Some topics raised by participants during the interview were sensitive and made them emotional. Since the interviews were by phone, I could only denote this from changes in the participant’s voice. If participants became emotional, I considered if asking further questions were necessary. I considered

not asking questions, if, from my point of view, it could upset the participant even more to do justice and respect the participants welfare.

The identities of the participants were protected to guarantee confidentiality. Therefore, all names, locations or other indicators were pseudonymised in the transcripts. Moreover, the interviews were held by telephone since video-calling over the internet could lead to privacy issues – advised by the Research Data Office of the University of Groningen. The telephone call is recorded by using a separate standalone digital voice recorder to guarantee data security.

Chapter 4

Research findings

In this chapter the research findings will be presented. First, there will be elaborated upon the differences in quarantine standards of the participants during the lock down. Thereafter, the participants' experiences about changing everyday activities is discussed together with their adaptive behaviour. Finally, the way participants experience their quality of life during the pandemic is discussed.

4.1 Individual quarantine standards

During the lock down, the participants differed in the degree of isolation they were in. Reasons mentioned by the participants are differences in the experienced fear for contamination, their health status or that of relatives, and their personal attitudes towards the situation. Most participants said that they were following the measures and continued some of their everyday activities, often in an adapted way. Within these adaptations, participants differed in their attitudes towards the measures. For example, some participants were neglecting the 1,5-meter distance advice and had physical contact with their children, where most participants kept distance from their family or even avoided meeting them. Most participants who were feeling healthy, aged below 70 and/or did not feel at risk in their hometown, were less strict in following the lock down measures. Five older adults mentioned a lack of fear for contamination due to the few COVID-19 cases that were detected in their hometown or the Northern Netherlands. Some healthy participants without fear for infection were extra cautious because of their personal characteristics. Often they did not want to spread the virus to their (older) friends, family, or parents. Three participants went in a form of voluntary quarantine. Mr. Takens and his partner went in total isolation which implied that they stayed in their apartment at all times. They did not go outside for groceries, social encounters, exercise, or other activities. Mr. Takens explained that he and his wife are fearing for contamination because they are both aged 75 and his wife has heart problems. Just like Mr. Takens, Mr. Kraima and Mrs. Gerritsen followed the measures stricter than most participants. Mr. Kraima's wife is living in a nursing home and he wants to visit her when the nursing homes open their doors again. To not put his wife and other inhabitants of the nursing home at risk for infection, Mr. Kraimpa stopped going outside his apartment except for doing the groceries once a week. Mrs. Gerritsen also stopped all activities outside the home, except for going out for a walk a couple of times a week. Mrs. Gerritsen mentioned taking extra measures because she has overweight and a heart disease.

4.2 Everyday activities and adaptation strategies during the pandemic

In general, all participants in this study used the three adaption processes of *selection*, *optimization*, and *compensation* in their everyday life during the outbreak. Regularly, these strategies were mentioned multiple times per participant and adopted to all kinds of changes in everyday life. The sub-adaptation strategies of *changing goals*, *substitution*, *modification*, and *relying on previous routines* were mentioned by nearly all participants. Furthermore, the data analysis showed that several sub-adaptation strategies are used together. For example, participants who experienced a forced stop of their activities due to the measures, regularly employed the strategies substitution or alternative activities in response. Besides, participants who voluntarily stopped their activities often substituted them. This was especially the case for older adults who stopped social encounters and substituted their contacts by other communication sources. Participants who reduced their activities modified these activities, which was often the case for social encounters and necessary activities.

Four groups of activities have been derived from the data analysis, which were important in older adults' everyday life during the pandemic. These are food and health; exercise; social encounters; leisure activities, performing hobbies, and attending events; and (voluntary)work.

Food and health

The first topic that followed from the interviews is *food and health* and includes the activities of doing groceries, going to health appointments, retrieving medicines, and housekeeping.

Most participants continued to do grocery shopping themselves, but they typically planned this activity more thoroughly compared to the pre-COVID-19 situation. A reason for this is the chance of meeting other people and the associated risk of getting infected. Mr. Peeters, who defines himself as being part of the risk group, said: *“Going to the supermarket is not a fun getaway, it is a necessary thing to do. I keep saying to myself that I am in the risk category. I am trying to avoid busy supermarkets. So, this morning, I was at the supermarket at 8 AM already. At that moment it is not that busy and because of that I am minimising the chance of getting infected.”*¹ Mr. Peeter’s story illustrates that he pushes himself to go to the supermarket because it is a necessary task. He plans his visit to avoid the supermarket when it is crowded which decreases the risk of contamination. Almost all participants similarly plan their visits to the supermarket. Another planning strategy mentioned by participants to avoid crowded places is to go to different shops compared to the pre-COVID-19 situation. For example, Mrs. Blom said: *“I prefer not to go to the supermarket. So, then I try to go to some smaller shops. I often go to a Reform store. That I combine for example with biking from [the city] to [my village]”*² Going to a Reform store implied that Mrs. Blom needs to plan an alternative route as the store is more exclusive in the region she lives in. Mr. Takens is the only participant who gets his groceries delivered. After he and his wife decided to go in quarantine, they received help from their daughter. To summarize, the strategy of anticipatory planning in time, route and place is often used by grocery shopping. Pushing themselves is a strategy mentioned when participants did not like to go to the supermarket but did go anyway.

Health appointments (by e.g. the dentist, general practitioner, or physiotherapist) were often cancelled by the health specialist or participants themselves due to the measures or the associated risk of infection by face-to-face contact. Most participants did not experience difficulties with the cancellation of health appointments, except for Mrs. Van Wijk and Mr. Kraima. Their physiotherapy had forcibly stopped, and alternatives did not exist in the beginning of the lock down because new treatment-methods needed to be drawn up. Mrs. Van Wijk, who had a back surgery before the outbreak, said: *“I barely had any physiotherapy the last few months. My therapy stopped after the COVID measures in the Netherlands. I only had a few video appointments. I just found another physiotherapist who wants to help me face-to-face. Yesterday I went to this person for the first time and it became clear that I need to start over all again with my treatment. The past 1.5 months I have done wrong exercises via video.”*³ Mrs. Van Wijk’s story illustrates that the lack of appointments and proper advice during the outbreak can cause a delay in peoples recovery processes. Mr. Kraima, who also needed physiotherapy after a surgery, had consults via the telephone. He mentioned the risk of a lot of guesswork that comes with physiotherapy that is not based on observations. This is making him uncertain about his recovery process. Other older adults whose appointments were cancelled preferred face-to-face contact over online substitutions. Hence, most participants experienced a forced selection of health appointments or chose to cancel the appointments themselves. The cancellation of appointments caused a delay in the recovery processes of some participants and may have long term health consequences. Only a few health appointments could be substituted in a later stadium of the lock down. Here, the quality and availability of alternatives was essential to succeed.

Retrieving medicines is mentioned by five participants as a necessity in their everyday life. Three participants continued to retrieve their medicines at a pickup point at the pharmacy or the supermarket. Two participants preferred to stay at home as much as possible and decided to let their medicines delivered. So, the participants often relied on previous routines and strategies concerning their medicines. Sometimes participants modified the activity of retrieving medicines and got them delivered.

¹ “De supermarkt is geen uitje maar dat is een noodzakelijk iets. Het enige wat ik daaraan doe is mezelf in acht nemen dat ik bij de risicogroep hoor, dat je probeert drukke supermarkten te mijden. Dus zoals vanmorgen was ik er al om 8 uur. Dan is het redelijk rustig in de supermarkt en is de kans op besmetting kleiner denk ik.”

² “Ik ga het liefst niet naar de supermarkt, dus dan probeer ik naar wat kleinere winkels te gaan. Ik ga vaak naar een Reform winkel. Dat combineer ik dan bijvoorbeeld met fietsen van stad G naar Dorp Z.”

³ “Ik heb nagenoeg geen fysiotherapie gehad. Dat was na de lock down maatregelen gestopt, met een enkele video afspraak. Nu heb ik eindelijk een fysiotherapeut gevonden die mij face-to-face wil helpen. Daar ben ik gisteren voor het eerst geweest en nu moet ik van vooraf aan beginnen. Ik heb 1,5 maand lopen klooiën met verkeerde oefeningen en video afspraken wat gewoon niet werkt”

Four participants continued receiving help from their housekeeper during the COVID-19 situation. For them, receiving help with housekeeping is a necessity to live independently. Besides, two older adults mentioned that the social interaction with their housekeepers contributed positively to their mental health. The four participants explained that they balanced the tensions between the risk of contamination and the positive effects of continuing the activities of the housekeeper and decided to rely on previous routines.

Exercise

An important theme during the interviews was exercising. Eight participants who were doing sports at a sports club or a gym could not perform their sports anymore due to the measures. Participants who were already doing outdoor or home exercising in the pre-COVID-19 situation, continued these activities.

For five participants, home exercising became a newly performed activity. Mrs. Gerritsen started exercising on the home trainer, Mr. Kraima started walking up and down the gallery, and Mrs. Scholten, Mr. Takens and Mrs. Froolik started with ‘Nederland in Beweging’, a Dutch television program which broadcasts a training of 30 minutes every morning. Mrs. Scholten, who was following dance lessons before the outbreak, said: *“I recently started doing Nederland in Beweging. I do that every morning and it is a very nice way to start the day with.”*⁴ Mrs. Scholten’s story shows that ‘Nederland in Beweging’ is part of a new routine during the outbreak. Similar to Mrs. Scholten, the other participants used home exercising as a way to stay active during the outbreak. Mr. Takens and Mr. Kraima, who both follow more restricted quarantine standards, substituted outdoor exercise by home exercising. Another way to do home exercises was mentioned by three participants who started following online lessons provided by the sport associations they were going to in the pre-COVID-19 situation. Mr. Roelofs, who was doing yoga and Pilates at the gym, said: *“The trainer recorded all the different classes with her own voice, so that’s something you recognize. The different routines that she has is also something that you recognize. And every time she sends new routines [...] I put the iPad next to my head and start doing my exercises on my sports mat.”*⁵ Mr. Roelofs’ story shows the satisfaction and pleasure due to the continuance of her yoga and Pilates lessons which is also experienced by the other participants who continued their sports at home. Hence, doing home exercises was a strategy performed by participants to get their daily exercises. It is used as an additional activity to stay fit and as a substitution for outdoor activities, sports at a sports club or the gym.

Doing exercises in the outdoor environment was another strategy of the participants to get to their required daily exercise. Walking, cycling, and running were mentioned by older adults as a substitution for their sports performed before the outbreak. Mr. Willems, who played basketball, said: *“What I do now, I have a running round around the polder which is about 8 kilometres. But if you are used to team sport, running is extremely boring. You need to motivate yourself and when it is windy, you need discipline to go out and have a run.”*⁶ Mr. Willem’s story shows that he substituted basketball training for running to stay active. However, he misses the energy and the motivation he gets when playing in a team. Similar to Mr. Willem, the participants who were also doing sports in groups are missing the interaction and social contacts.

Participants who continued exercising outdoor were also adapting this activity by increasing the duration and frequency. When doing exercises outdoors, older adults wanted to avoid crowds and busy places which were associated with a risk for infection. Mr. Peeters, who is walking with his wife regularly since the outbreak, said: *“[When we walk] we try to walk the wider paths and if necessary, we follow the regular open road. Then we take for granted that cars drive by. We don’t cross narrow*

⁴ “Ik ben nu ‘s morgens begonnen met Nederland in Beweging. Dat doe ik dan nu elke ochtend en dat bevalt mij goed als start van de dag.”

⁵ “De trainster heeft zelf die lessen ingesproken dus haar stem herken je, de routines die ze heeft herken je. En ze stuurt elke keer weer nieuwe onderdelen. [...] Ik zet dan de iPad bij mijn hoofd naast het matje en dan ga ik aan de gang.”

⁶ Wat ik nu doe, ik heb hier een rondje om de polder en dat is ongeveer 8 kilometer. Dat doe ik in een stevige looppas of ik ren dat dan, een paar keer per week. Maar als je teamsport gewend bent dan is dat dodelijk saai. Je moet jezelf motiveren en als het heel hard waait dan moet je toch wel veel motivatie hebben om je trainingspakkie aan te trekken en te gaan hobbelen.”

*paths or paths within the forest. We also walk at certain times.*⁷ The story of Mr. Peeters illustrates the planning of outdoor exercises at specific times and along certain routes. Using such planning, they take for granted that these routes may not be the most beautiful and quiet, for example, when they walk along the main road. Similar to Mr. Peeters, other participants are planning their activities too in time, route and place. Thus, the participants changed their goals about exercises, some performed new activities and other relied on previous routines when exercising outdoors. To facilitate that, participants use the strategy of anticipatory planning.

Social encounters

Another important theme for older adults during the outbreak was social encounters. Most participants continued to see their children and parents during the outbreak. Mr. Willems, who is avoiding visits with others except for his children, said: *“My youngest daughter visits me now rarely. During Easter my other daughter and her boyfriend visited. We met in my garden taking the 1.5 M rule into consideration”*⁸ Mr. Willems story shows the lower number of encounters he has with his children since the outbreak. When the children visited Mr. Willems, they arranged the encounter at Mr. Willem’s house, in the garden at a 1,5-meter distance. Just like Mr. Willems, many other participants reduced and modified their social encounters by the following strategies: a reduction of the number of visits and visitors, meeting in the open air, keeping distance, and shorten the duration of visits. In contrast to family visits, visits with friends and acquaintances were often cancelled or limited to one or two friends. When these encounters took place, the similar modification strategies were used as with family visits.

Contact via telephone calls, video calls, sending messages, sending post cards or flowers, increased in importance during the outbreak. Mr. Kraima, who avoids social encounters during the outbreak, said: *“My acquaintance also says; when do you stop by again to drink a coffee? I answered by saying, when this whole thing is over. I will not take the change of you infecting me or vice versa. But these are the type of visits that you miss nowadays. For now, we call each other and send messages every now and then. In that way we keep in touch.”*⁹ Mr. Kraima’s story shows that the substitution of visits with others via (online) communication sources is a way to stay in touch and at the same time reduce the risk of infection. Similar to Mr. Kraima, almost all participants mentioned contacting others as a substitution for the reduction in face-to-face contacts. Contacting others was also a way to give more attention to older adults who could feel lonely in these uncertain times. Some participants mentioned using their mobile device more often compared to the pre-COVID-19 situation.

Also new social encounters came into existence. Mr. Peeters, for whom going to the local fishmonger was not a routine before the outbreak, said: *“On Fridays the fish drives by at 4 PM. At that moment you see your neighbours and have a quick chat. That is something that you take in mind, if you want to get some fish you have to be at home at 4 PM.”*¹⁰ Mr. Peeters’ story shows the new activity of going to the local fishmonger is a way to meet his neighbours and have a chat. Similar to Mr. Peeters, participants mentioned that they had more conversations with their neighbours in the streets, in the garden or by local shops because everyone has been more at home.

Leisure activities, performing hobbies and attending events

Other activities that were part of the everyday life of older adults in the pre-COVID-19 situation were leisure activities, the performance of hobbies outside the home and attending events. These activities were often cancelled due to the ILD measures. Older adults mentioned the cancellation of city visits, going to cultural amenities as cinema/theatre, restaurants and cafés, entertainment events as soccer

⁷ “Dan [tijdens het lopen] proberen we wat bredere paden en desnoods gewoon de openbare, de gewone weg uit te zoeken en maar voor lief te nemen dat er af en toe een auto langskomt. Dus niet langs smalle paadjes of bospaadjes. En op bepaalde tijden lopen. Sowieso alles inrichten op bepaalde tijden.”

⁸ “Nu komt heel soms mijn jongste dochter even langs. Met Pasen is mijn andere dochter met haar vriend geweest. In de tuin gezeten en netjes op 1,5-meter van elkaar.”

⁹ “Mijn kennis zegt ook wel, wanneer kom je weer een keer koffiedrinken? Ik zeg, ja zodra het hele gedoe over is want ik kom nu ook niet bij je want ik wil je niet aansteken of zij mij. Dat zijn bezoekjes die je op een bepaald moment wel mist. Maar nu doen we het met een belletje of een berichtje van hee hoe gaat het. Dan hou je elkaar een beetje op de hoogte.”

¹⁰ “Vrijdags dan komt de visboer langs om 16 uur ’s middags. [...] Dan zie je de burens vrijdagsmiddags en dan praat je eventjes met elkaar. En dat hou je in de gaten, want als je even een visje wilt halen dan is het, oké om 16 uur moeten we thuis zijn.”

games/concert and participating in religious services. Hobbies outside the home as singing in a choir and playing in a band, were also cancelled due to the measures, just like weekend trips and holidays.

For some activities, older adults found a way continue these activities in a different way. Mr. de Graaf, who liked to go to the city centre as a leisure activity in the pre-COVID-19 situation, said: *“Every weekend we would go to the city for some coffee and a piece of cake. But now we buy the cake on Friday and eat it at home. You have to put up your own decorations [...] So in your own garden with a piece of cake, that’s also fun!”*¹¹ Mr. de Graaf’s story illustrates that he substituted the activity of eating a pastry in the city on Saturday by eating a pastry in his garden. Similar to Mr. de Graaf, many other participants substituted activities important to them, for example religious services. Mr. de Ruiter, who participated in religious services in the pre-COVID-19 situation, said: *“At 10:30 AM the online church service starts. We try to stick to that ritual and really start at 10:30AM and we lit a candle at home.”*¹² Mr. De Ruiter’s story shows that he and his wife normally went to a church service which is now substituted by an online video. Not everyone perceived substitution of activities as a good alternative, if they did not then they often stopped the activity. Besides substitution, older adults were often seeking for alternative activities in the home environment. Mrs. Scholten, who liked to go to the cinema before the outbreak, said: *“Otherwise I would go to the movies or go out for a lunch, my focus was much more on the outside and I did not have much time for my needlework. I do that more often now. I did that yesterday afternoon and today I did some embroidering while watching a movie.”*¹³ Mrs. Scholten’s story shows a shift of performing activities outside the home towards activities inside the home during the outbreak. Similar to Mrs. Scholten, many participants mentioned that hobbies performed in the home environment became more important including reading, watching the television or Netflix, doing (board)games, and doing needlework. Activities as maintenance, renovations, and tidying up the house were also performed more often. Mr. Kuipers who is working from home since the outbreak, said: *“Our garden looks much better than it did in previous years. That has been an advantage of this period. I have been outside often to clean things. The dormer is clean, and all the moss is gone, much sooner than in regular times.”*¹⁴ Just like Mr. Kuipers almost all participants mentioned that they have spent more time in gardening and tidying up the kitchen, cellar, or other rooms in the house. Thus, participants often looked for substitutions or alternative activities inside or around the home due to the cancellation of leisure activities and hobbies outside the home.

(Voluntary) work

Voluntary work and regular work were also important activities for the participants in the pre-COVID-19 situation. At the time of the interviews, Mr. Kuipers, Mr. Koster and Mrs. Blom were still working 40 hours per week. During the lock down, Mr. Kuipers and Mr. Koster were obliged to work from home. In essence, their work did not change much but they needed to contact their colleagues via online communication sources. For Mrs. Blom, a lot has changed in her work due to the absence of orders from clients. Consequently, she looked for alternative projects to work on and to finance the period of the outbreak she relied on her savings.

Seven older adults were doing voluntary work which took up a few hours to five days per week before the outbreak. During the lock down, these activities were reduced and often cancelled. Only Mrs. Gerritsen experienced an increase in workload because working online took her more time and effort to complete her tasks. Mr. Mol, who worked voluntarily in a museum, said: *“That [voluntary work] stopped completely. It is also closed so it is entirely on hold. And I think that’s a pity because those are your social contacts with whom you feel necessary and worthy.”*¹⁵ Mr. Mol’s story shows that the

¹¹ “We gingen elk weekend naar de stad voor een kopje koffie met een gebakje erbij. Maar nu halen we het vrijdag op en dan doen we het gewoon thuis. Je moet zelf de slingers ophangen [...] Zo in je eigen tuin met een gebakje, dat is ook leuk!”

¹² “Om half 11 begint die [online] dienst. Dan proberen we dat ritueel ook aan te houden dat we ook echt om half 11 gaan beginnen. Dan steken we thuis de kaars aan die we gewend zijn om aan te steken”

¹³ “Anders ging ik naar de film of lunchen, he dan was ik veel meer naar buiten gericht en kwam ik niet zo toe aan mijn handwerken. Dat doe ik nu veel meer. Zo heb ik dat gistermiddag gedaan en vandaag ben ik aan het borduren geweest terwijl ik naar een film keek.”

¹⁴ “De tuin ziet er al een stuk beter uit dan vorige jaren. Dat is wel een voordeel van deze periode geweest. Ik ben veel meer buiten geweest om dingen schoon te maken. De dakkapel is schoon en al het mos tussen de tegels is allemaal veel eerder weg dan in een normale situatie.”

¹⁵ “Dat ligt allemaal stil nu. Het is ook gesloten dus het is ook helemaal on hold. [...] En dat vind ik jammer want dat zijn net de sociale contacten dat je je toch zinvol voelt en waardevol”.

social contacts in voluntary work make the activity meaningful and valuable. Similar to Mr. Mol, the working and voluntary working participants missed spontaneous interactions and social encounters with colleagues. Besides, participants doing their (voluntary) work at home mentioned the presence of their partner or children at home. Mr. Mol said: *“Normally my wife works in the city for four days a week. Then I have the place to myself. Because of my voluntary work, I used the computer a lot. But it is now used by my wife in the home office. So yes, I miss the freedom to do my thing when it suits me.”*¹⁶ Mr. Mol’s story shows that he experiences a reduction in the freedom to work at preferred times because he needs to share the computer and home office with his wife. Just like Mr. Mol, participants living with a partner needed to share their computer, the living room or home office during the outbreak because their partners were at home to. To summarize, most participants who performed voluntary work needed to stop their activities due to the ILD measures. When it was possible, participants substituted their (voluntary)work by performing their activities from home. Working at home meant that space and belongings needed to be shared with the other members of the household.

4.3 Perceived quality of life

Most participants expressed that they were in a good health and feeling well during the outbreak, both physically and mentally. In general, participants mentioned the lack of physical contact together with the reduction of their freedom to move as the biggest impact of the measures on their everyday life.

Many participants experienced positive feelings during the outbreak, including the feeling of freedom, rest, relaxation, and unwinding. Mr. de Ruiter said: *“Actually, it has its upsides. You don’t have to do anything, and I can enjoy that in some way. The need and must is no longer there.”*¹⁷ Mr. Ruiter’s story illustrates the positive feeling he is experiencing due to the lack of pressure of normal life. Just like Mr. Ruiter, participants experienced slowness and deceleration. Participants mentioned taking more time for their activities, for example having lunch on a slower pace and take time to read the newsletter. A reason for participants to enjoy the quietness even more was because their priorities were shifting during the outbreak. Mrs. Froolik said: *“You can’t do anything anyways, so enjoy the peace around you and enjoy the little things that are there. Now you can enjoy more things such as the shapes in the potato landscape. That’s something that gets your focus. For some reason you have more peace to enjoy those things.”*¹⁸ The story of Mrs. Froolik shows that she is experiencing peace during the outbreak which made her focus shift and let her enjoy the little things in life, like the potato field next to her house. Other participants also mentioned shifting priorities and that they were rethinking what is important in life. Some participants mentioned having a positive attitude in life, even during the crisis. Mrs. Pietersen said: *“Every cloud has a silver lining. I can’t help it, maybe I live too cheerful.”*¹⁹ Mrs. Pietersen’s story shows that her positive outlook does not change the way she feels during the outbreak. Different to Mrs. Pietersen, some participants were not having an entire positive outlook because they felt some uncertainty about the consequences the virus may cause for their future. Mr. Peeters, who is aged 71, is overweight and has high blood pressure, said: *“We at our age should not end up at the intensive care, the respiration so to say, we simply will not make it. So, we have those types of conversations. That is something we prepare for, for such a difficult question.”*²⁰ Mr. Peeters’ story shows that his health conditions decrease the chance to survive the virus and associate infection with death. Therefore, Mr. Peeters and his wife prepare themselves for the scenario of contamination and talk about the question if they want to go in the intensive care unit

¹⁶ “Normaal werkt mijn vrouw 4 dagen in de week in de stad en dan heb ik de ruimte aan mezelf. Door vrijwilligerswerk had ik altijd wel veel de computer nodig maar die wordt nu gebruikt door mijn vrouw in de aparte werkkamer. Je mist even de vrijheid om daarin op het moment dat het jou past dingen te doen.”

¹⁷ “Eigenlijk heeft het ook wel wat leuks. Je hoeft helemaal niets en daar kan ik op die manier nog wel van genieten. Dat het moeten er een beetje af is.”

¹⁸ “Je mag toch niets dus geniet dan maar van de rust om je heen en geniet van de kleine dingen die er dan zijn. Je kan meer genieten van, wat ik zei, bijvoorbeeld de vormen in het aardappelland. Daar sta je meer bij stil, je focus wordt anders gelegd. Je hebt op de een of andere manier meer rust om daarvan te genieten.”

¹⁹ “Elke wolk heeft een zilveren rand. Ik kan er niets aan doen, ik leef misschien te opgewekt hoor.”

²⁰ “Wij met onze leeftijd moeten niet op de intensive care komen, aan de beademing zeg maar, dat halen we gewoonweg waarschijnlijk niet. Dus dat soort gesprekken heb je dan wel een beetje. Toch van, ik wil niet aan de beademing want daar kom ik vast niet goed uit. Dat is wel iets waar we ons op voorbereiden, op zo’n mogelijke vraag.”

or not. Similar to Mr. Peeters, participants who linked infection to the high chance of not surviving also had these conversations with their partners or family members and often times, they said not wanting to go in the intensive care unit. Other participants were also worried about future global challenges and took stance in debates about climate, politics, and economy.

Not everyone could deal with the lock down situation well. Difficulties were experienced when participants missed physical and social contact, when they could not meet their needs or by a lack of structure in their life. Mrs. Van Wijk, Mr. Kraima and Mr. Willems who are living alone mentioned having a lower quality of life during the outbreak. They slept poorly and had negative thoughts, including depressive feelings and feelings of loneliness. Mr. Kraima, whose wife lives in a nursing home, said: *“I find it terrible that I can’t visit her anymore. That you can’t touch each or support each other anymore.”*²¹ Mr. Kraima explains here the difficulties of being alone and not having the opportunity to touch or support loved ones. This lack of physical contact and social support is also mentioned by Mrs. Van Wijk and Mr. Willems. Participants living with a partner also experienced some negative feelings due to the lack of social- and physical contact with relatives. However, they could handle the situation better because they could have physical contact with their partner and share their experiences. In contrast, two participants who said not being a cuddly person experienced no difficulties with the lack of physical contact. Another loss in everyday life was the freedom to move. Participants mentioned that it was not self-evident anymore to go on a trip with the car, to do some shopping, or to go see other people. Mr. Takens, who does not go outside anymore due to the quarantine he is in, perceives restrictions in his freedom to move. He said: *“[The biggest impact of the measures and the virus] is the restriction of your movement. Otherwise you say, I am going to post a letter and you jump on your bike. Or, it is a beautiful day so let’s go for a walk after dinner. That you can take a bike or car ride without restrictions.”*²² Similar to Mr. Takens, participants mentioned that they could not wait for the moment ILD measures would be eased. Another difficulty was mentioned by Mrs. Van Wijk who experienced difficulties in meeting her needs. Mrs. Van Wijk, who is a stroke survivor, living alone and recovering from a back surgery, said: *“I have searched for someone to help me at the municipality. Volunteers because I can’t afford for someone to help me. My money is just gone [...] I am a vulnerable elderly, I need help but I don’t get it!”*²³ The story of Mrs. Van Wijk shows the need for help which is not provided. The lack of financial resources makes it more difficult for her to get assistance. Most older adults mentioned that they did not need help during the outbreak and maintained their level of independence. Furthermore, the difficulty experienced by the loss of structure during the outbreak emerged due to the cancellation of meaningful activities for some participants. Three participants mentioned that they have implemented new daily routines in response. Mr. Willems, who is living alone and had an active life outside the home, said: *“Every night I try to think about the activities that I will do the next day. I find it hard to start the day without any concrete plans.”*²⁴ Mr. Willems’ story shows that new routines can give solution to maintain daily structure. Similar to Mr. Willem, most older adults mentioned that they were searching for activities to keep themselves busy. Staying busy was a strategy to avoid being bored, to be distracted and to not think about the pandemic. Eight participants relied on their prior daily routines to maintain a grip on the situation.

Even though all participants experienced some negative feelings due to changes in their daily life, sixteen participants adopted the strategy of acceptance, rationalizing, and putting the situation into perspective to deal with such negative feelings. These strategies are adopted to all kinds of changes, ranging from the cancellation of events and holidays to the reduction in social- and physical contacts. Mrs. Gerritsen, who stopped seeing her children and grandchildren, said: *“We [my husband and I] are*

²¹ “Ik vind het verschrikkelijk dat ik nu niet naar haar toe kan. Dat je elkaar niet even aan kunt raken. Dat je elkaar niet even kunt steunen.”

²² “[de grootste impact van de maatregelen en het virus] is de beperking van je beweging. Anders zeg je van, ik ga een de brief op de bus brengen en stap je op de fiets. Of, het is prachtig weer dan gaan we vanmiddag na het eten even een wandeling maken. [...] Dat je onbeperkt weer op de fiets kan stappen en autorijden.”

²³ “Ik heb bij de gemeente gezocht voor iemand die me wou helpen. Vrijwilligers, want ik kan het niet meer betalen om iemand me te laten helpen. Mijn geld is gewoon op. [...] Ik ben een kwetsbare oudere, ik heb hulp nodig maar ik krijg het niet!”

²⁴ “Ik probeer de avond van tevoren te bedenken wat ik de volgende dag ga doen want ik vind het lastig als je de dag begint zonder concrete plannen. Want anders had je allemaal afspraken, dan ging je overal heen”.

practical. If things are not possible than they are just not possible. We are not going to sit in the corner feeling sorry for ourselves. No, we do not do that. We have to continue because nobody can do something about it."²⁵ Mrs. Gerritsen's story shows that she has a flexible attitude and accepts the situation because she cannot do anything about it. Similar to Mrs. Gerritsen, other participants also mentioned that they accepted the fact that they were not in control in the COVID-19 situation. Another strategy was to rationalize and think about life-changing events participants experienced in the past. Mr. Koster, who is not worried about the outbreak or being infected, said: *"You know, I do not want my life to be led by that. Two years ago, I had a serious car accident.[..] Faith, well that is a part of life."*²⁶ The story of Mr. Koster shows that his experiences during the car accident made him realize that he does not want to live in fear as fate can always strike. Similar to Mr. Koster, participants with life-changing experiences did not want the virus to impact their life. Besides accepting and rationalizing the situation, participants compared their situation with that of people who are worse off during the outbreak, for example comparisons with people who are infected, being hospitalized, or in the intensive care. Mr. Willems, who is living in a detached home in a rural area, said: *"I count my blessings because I can still do a lot. I can work in the garden, I have quite some ground around the house, and I can go for a quick run or walk. There are many people who have things worse than me. I can't complain."*²⁷ Mr. Willems explains here that he is appreciating his own situation. Similar to Mr. Willems, many participants appreciated their ability to still perform activities as well as the characteristics of their home environment or area they live in, including their garden, nearby green and/or blue spaces.

²⁵ "Wij zijn wat dat betreft wel praktisch. Als het niet kan dan kan het niet en het is niet zo dat wij dan zielig in een hoekje gaan zitten. Nee dat doen we niet. We moeten gewoon door met wat er is. En niemand kan hier wat aan doen."

²⁶ "Weetje, ik wil daar mijn leven niet door laten leiden. Ik heb twee jaar geleden een heel bizar verkeersongeluk gehad [...] Het noodlot, ja dat is een onderdeel van het leven."

²⁷ "Ik tel mijn zegeningen want ik kan nog veel doen. Ik kan in de tuin werken, ik heb vrij veel grond om het huis heen en ik kan mijn rondje rennen en lopen. En er zijn genoeg mensen die het aanzienlijk slechter hebben dan ik. Dus dan mag ik eigenlijk helemaal niet klagen."

Chapter 5

Discussion and conclusion

Worldwide, national lock down measures and the risk of COVID-19 infection impacted (and is still impacting) many lives, especially that of older adults. To understand how older adults living independently in the Northern Netherlands cope with the pandemic, an attempt is made to answer the following research question: *How do independently living older adults in the Northern Netherlands incorporate adaptation strategies in their everyday activities to improve their quality of life during the Dutch ILD measures in the COVID-19 outbreak?* The study findings show that all older adults used a variety of adaptation strategies to battle social, environmental, and health challenges during the COVID-19 outbreak to maintain their quality of life. To elaborate on this, the answers on the three sub-questions will be discussed consecutively and reflected in literature. Thereafter, a conclusion and reflection on the research will be given.

5.1 Synthesis of the research findings

The participants' everyday activities, and therefore their everyday life, changed tremendously during the COVID-19 outbreak. Activities concerning food and health (doing groceries, going to health care appointments, retrieving medicines, and receiving help with housekeeping) often continued but in an adapted way, except for health care appointments which mostly stopped. Home exercise and outdoor exercise increased in importance, just like the performance of hobbies or other activities inside or around the home environment. Often, social encounters and (voluntary) work continued adaptively or stopped at all. Leisure activities, hobbies outside the home, attending events and holidays and trips mostly stopped. Linking these activities to the Indexes of Instrumental Activities of Daily Living²⁸ (Lawton & Brody 1969) and Enhanced Activities of Daily Living²⁹ (Rogers et al., 1998), it becomes clear that changes in both IADL and EADL were experienced by the participants. Often, the IADL continued and were performed in the home or neighbourhood, and the EADL stopped that were performed outside the house and new EADL were devised in and around the home. This resulted in a shift in life-spaces where everyday life takes place (Webber et al., 2010; Peel et al., 2005). In the pre-COVID-19 situation most participants spent a lot of their time with activities outside the house. During the lock down, activities in and around the home environment became more meaningful. Therefore, local encounters and amenities became more important.

Table 6 Challenges during the outbreak and ILD measures

Challenges	Description	Example of a challenge
Social	Challenges concerning encounters with family, friends, and other people in daily life.	- Need to stay at home as much as possible. - Reduce social contacts. - No physical contact with other people outside the household.
Environmental	Challenges concerning environmental measures which are the result of national and local COVID-19 policies in organizations, buildings, or shops.	- Following national and local measures. - Depend on the behaviour of other people in public space.
Health	Challenges concerning the participants own health or the health of relatives	- Perceived risk for contamination and/or transmission. - Own stance in the situation

Source: author

The participants of this study mentioned the ILD measures and their personal attitude towards the situation as main reasons for the changes in everyday life. An overall finding is that these changes in everyday life can be categorized along three central challenges which are fight during the lock down.

²⁸ IADL mentioned by participants are: telephone use, shopping, food and nutrition, housekeeping, mode of transportation, responsibility for own medication, ability to handle finances and home maintenance.

²⁹ EADL are: performing hobbies, exercising, attending events, leisure activities, holidays and trips.

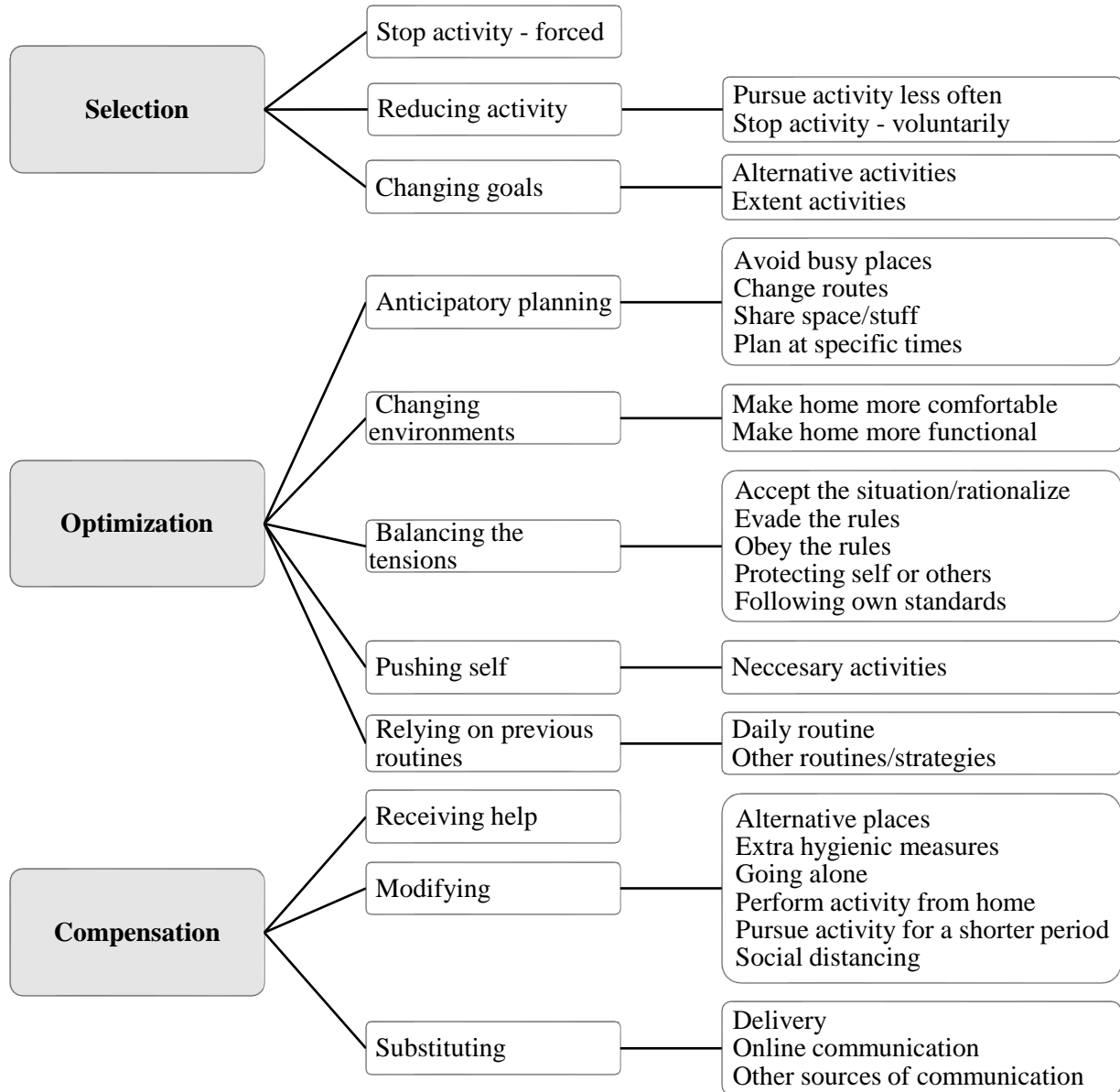
Table 6 describes these social-, environmental-, and health challenges and presents examples of experienced challenges. To illustrate the linkages between challenge, adaptation, and quality of life, an example is given of a participant's response towards a challenge. Mr. Takens mentioned in the interview that he would love to see his children. However, the ILD measures and his own and partner's health status made him decide to not see them during the lock down. This personal attitude towards the situation enables Mr. Takens to reduce the risk of infection and accepts that he is not in control in this situation. Therefore, he uses other communication sources to contact his family such as conversations by telephone or message. This example shows that Mr. Takens reacted on the social challenge by the adaptation strategies of selection (stop activity), optimization (accept the situation) and compensation (substitution) to maintain his quality of life. These social-, environmental-, and health challenges differ to the physical challenges found by other studies about the adaptive behaviour of older adults as a result of the different natures of the studies (Siren & Havamies-Blomqvist, 2009; Gignac et al., 2002; Rush et al., 2011; Koon et al., 2020; Janke et al., 2009). Earlier studies focussed on changes in everyday life due to older adults' health as age-related losses or disabilities, while this research focussed on the external factor of the COVID-19 crisis impacting daily activities.

Most participants adaptively responded often to all three challenges in their everyday life. However, the frequency and type of adaptation strategy used differed per person. The variety in sub-adaptation strategies mentioned by the participants is illustrated in figure 5. Multiple factors can explain these differences, such as the participants' lifestyle before the outbreak, living arrangement, health status, sense of vulnerability, and the accessibility and availability of resources and alternatives. This individual heterogeneity corresponds the theory of Baltes & Baltes (1990) and earlier study results (Siren & Havamies-Blomqvist, 2009; Gignac et al., 2002; Rush et al., 2011; Koon et al., 2020; Janke et al., 2009). The figure also illustrates that the sub-adaptation strategies employed fit within the adaptive processes of *selection*, *optimization*, and *compensation* of Baltes & Baltes' theory (1990). In addition, the adaptation strategies found by Rush et al. (2011) among community living older adults with mobility limitations correspond with the strategies in figure 5. New strategies compared to the model of Rush et al (2011) are the selection strategy *stop activity – forced* and the optimization strategy of *relying on previous routines*. A compensation strategy that was not mentioned by the older adults in the COVID-19 situation is *using aids*. This is probably caused by the differences in challenges older adults with mobility limitations faced (physical challenges) and older adults in the COVID-19 situation (social-, environmental- and health challenges). Furthermore, it is found that all participants used all three selection, optimization, and compensation processes in their everyday life during the outbreak. Besides, participants often used multiple sub-adaptations together, which is verified by earlier research in which is stated that adaptation strategies are not mutually exclusive but go in concert with each other (Koon et al., 2020). Substitution by technology turned out to be an important strategy to continue activities, for example health appointment and exercising, and to maintain social connectedness as predicted by Banskota et al. (2020).

Concerning the participants' quality of life during the COVID-19 situation, most participants continued to perceive good physical health and wellbeing. The adaptive behaviour of older adults enabled them to deal with the situation by the continuance of meaningful (new or adapted) activities and routines. Schwanen & Ziegler (2011), Siren & Blomqvist (2009) and Vanleerberghe et al. (2017) argued for the importance of independence, continuance, sense of autonomy and control for older adults' perceived satisfaction in life (Schwanen & Ziegler, 2011; Siren & Blomqvist, 2009; Vanleerberghe et al., 2017). Striking is that participants who decided to go in a total or stricter isolation also perceived good health and wellbeing. This might be explained by the reduced amount of stress people experience when they go voluntarily in quarantine (Brooks et al., 2020). Almost all participants experienced some negative thoughts due to the lack of social- and physical and the limitations in their freedom to move, but these did not overshadow their overall quality of life. Nevertheless, three older adults who were living alone expressed feelings of loneliness, depression and problems sleeping. Goodman-Casanova et al. (2020) found similar results among older adults living alone during the COVID-19 crisis. Studies argue the increased risk for loneliness and depressive thoughts by older adults (Morley & Vellas, 2020; Berg-Weger & Morley, 2020; Santiani et al., 2020) because social relationships are of great importance for older adults' pleasure and enjoyment in life

(Bowling & Gabriel, 2007). One participant with a bad health status and a lack of financial and social resources was experiencing worse mental and physical health during the outbreak. Brooks et al. (2020) argued that the negative health outcomes during quarantine can be exacerbated. Hence, personal characteristics together with the availability of financial resources, social networks and alternatives provided by (health care) institutions are important to meet individual needs.

Figure 5 Older adults' sub-adaptation strategies during the ILD measures



Source: author

5.2 Conclusion

Taking all these findings into account, it can be concluded that independently living older adults in the Northern Netherlands showed flexibility, creativity, and the ability to adapt in the COVID-19 situation. For older adults, the outbreak meant that daily activities changed enormously due to the ILD measures, their own position, and their feelings of vulnerability. Three overarching challenges are found: social-, environmental-, and health challenges. To combat these challenges, older adults used the adaptation strategies of selection, optimization, and compensation to maintain quality of life. All older adults used some, and often multiple, adaptation strategies. The types and amount of adaptations being used in daily life differed per person and per activity. Hence, this heterogeneity between older

adults are important to acknowledge in studying adaptive behaviour, including the individual's lifestyle before the outbreak, health status, living arrangement and life-history. Other important aspects are the individual resources and the availability of alternatives provided by other people or by institutions. Most older adults experienced a good health and quality of life during the outbreak. Adaptation seemed important to achieve a good wellbeing in the COVID-19 situation. Older adults kept their independence, could continue to live their lives by accepting the situation and stay in control of their own routines and activities.

5.3 Reflection and future research

This study gives insight in the employed adaptation strategies, everyday activities, and perceived quality of life of independently living older adults in the Northern Netherlands. In this study, complex interrelationships between these concepts were found, but not fully untangled. Further research could try to give more insight in these interrelationships between adaptation, everyday activities, and quality of life. The huge impact of the COVID-19 situation has also affected this study. Initially, the research would have encompassed existing information about mobility patterns and experiences in everyday life of independently living older adults which explains the focus on mobility within this thesis.

A limitation of this study might be the way activities and quality of life is determined. The use of physical functioning scales and quality of life domains in research is often criticised due to their instrumental character that neglect the individual experiences. As the study aimed to get insight in individual experiences, the physical functioning scales and quality of life domains were a guidance to differentiate between daily activities and to interpret older adults' experiences along the quality of life domains. Having a better understanding of mobility experiences, a more comprehensive study could have incorporated mobility purposes, by for example analysing mobility change along the mobility elements from Metz (2000). Another limitation of this study is that the study population consisted of independently living Caucasian older adults who seemed to have no troubles with the accessibility of resources, except for one participant who experienced negative effects due to a lack of financial and social resources. Besides, the study participants were relatively young; 10 of the 17 participants were aged below 70 which is the Dutch threshold for older adults being at a high risk for COVID-19. Older adults at higher ages could have experienced different challenges and may have used other strategies. Hence, future research could consider another study population in terms of education- and income level, ethnic background, and age. Another geographical context would also be interesting to study. The outcomes of this study show that the geographical context where limited COVID-19 cases are detected, may have affected the experienced threat for the virus for some participants. Future research could consider a study among older adults in the more southern regions of the Netherlands with more COVID-19 cases. The study could also be performed in another country with distinct national lock down measures.

The strength of this study is the in-depth qualitative approach used to understand challenges during the outbreak and the employed solution strategies by older adults. Besides, the study showed its relevance for the scientific world as it confirms the wide applicability of the SOC model by Baltes & Baltes (1990). The SOC model is shown to be useful to study adaptive behaviour of older adults in a situation where external forces influenced everyday activities. The study also showed its social relevance as municipalities, communities, and caregivers could be informed about the perceived challenges during the outbreak. Older adults living alone with limited social contacts and financial resources should get extra attention. Support networks or help desks could be initiated together with the improvement of the availability of material goods (e.g. a free ride to the hospital) or immaterial goods (e.g. a sympathetic ear). This could enable vulnerable older adults to maintain their independence during the outbreak and support their quality of life. In addition, municipalities and the national government can use these findings to re-examine the ILD measures and its consequences for the everyday life of older adults and their wellbeing. The study shows that ILD measures seem to be a fitting temporary solution to prevent further spread of virus and protect vulnerable groups in society. Temporary, because long-term consequences cannot be overseen yet.

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Appendices

Appendix 1. Interview guideline

Follow-up in-depth interviews

Uw beweging is al eerder in kaart gebracht door interviews en trackers door Louise Meijering en Gijs Westra. Het doel van dit tweede interview is om deze informatie aan te vullen met informatie over hoe u de opgelegde maatregelen tijdens de Corona uitbraak in Nederland ervaart en wat voor impact dit heeft op uw beweging. Met opgelegde maatregelen bedoel ik de maatregelen die vanaf 16 maart 2020 zijn ingesteld door de Nederlandse regering. Voorbeelden van deze maatregelen zijn de 1,5 meter afstand-regel, dat er maximaal 1 persoon naar de supermarkt mag gaan en er gevraagd is zoveel mogelijk thuisblijven.

Eerst zullen we het hebben over hoe het met u gaat in deze periode en wat u van de maatregelen vindt, daarna zal ik u vragen over uw dagelijkse activiteiten, uw beweging, sociale contacten en uw welzijn.

Als u een pauze wilt nemen, geeft u dat alstublieft aan. Als er vragen zijn die u liever niet beantwoordt, dan is dat prima, ook dat kunt u gewoon zeggen. Het interview duurt ongeveer een uur, maar afhankelijk van hoeveel u vertelt en wat we bespreken kan het wat langer of korter zijn.

Het interview zal worden opgenomen en getranscribeerd door mij. Dit is ook beschikbaar voor de andere werkenden aan het project Bewegingsvolle Beweging. We zullen dezelfde voorwaarden gebruiken voor de waarborging van uw privacy en beheer van de data als bij het vorige interview met Louise Meijering. Geeft u hier toestemming voor? U heeft dit toestemmingsformulier destijds ondertekend en ik kan u dit formulier nogmaals via mail toesturen. Heeft u hier behoefte aan?

Heeft u verder nog vragen voordat we beginnen?

Over uw ervaringen met Corona en maatregelen in het algemeen

Ik ben allereerst benieuwd hoe het met u gaat in deze omstandigheden.

- Kunt u vertellen hoe deze maatregelen voor u zijn?
 - Voelt u zich veilig/ gezond?
- Wat vindt u van de getroffen maatregelen door de Nederlandse regering?
- Hoe gaat u om met deze maatregelen?
 - Wanneer bent u de maatregelen gaan volgen? En met wie?

Over uw dagelijkse activiteiten tijdens de maatregelen

- [SOC] Kunt u mij vertellen wat u nu zoal op een dag doet?
 - Zijn dit typische dagen uit een normale week? Waarom wel/niet?
 - Hoe laat staat u op?
 - Wat doet u tot de lunch? Wanneer heeft u lunch?
 - Wat doet u allemaal in de middag? En avond?
- [Basic necessities] Hoe komt u aan uw boodschappen?
- [Basic necessities] Hoe komt u aan uw medicijnen of hoe kan u de huisarts bereiken?
- [Basic necessities] Hoe gaat het met de huishoudelijke hulp?
 - Kapper? Sporten die u uitvoerde? Etc.
- [WHO physical/ Wilful mobility] Ik zag dat u actief bent met fietsen, vrijwilligerswerk etc, hoe gaat dat nu in deze situatie?
- Hoe vaak gebruikt u nu de auto? Waarvoor?
- Wat voor activiteiten onderneemt u nu waarbij u vindt dat u actief bent op dit moment? (bijvoorbeeld wandelen, tuinieren, sporten)
 - Met wie? Hoe lang? Hoe voelt u zich daarbij?
- [Wilful stillness] Wat voor activiteiten onderneemt u nu waarbij u vindt dat u minder actief bent? (bijvoorbeeld een boek lezen, TV kijken, iemand bellen)
 - Met wie? Hoe lang? Hoe voelt u zich daarbij?

- [*WHO physical/ WHO Social participation/ SOC*] Als u nadenkt over het antwoord dat u gaf op deze vragen, hoe ziet u dan de balans tussen actief en niet actief zijn in uw dagelijkse leven ten opzichte van vóór de maatregelen?
 - Bent u hier tevreden over?
 - Heeft u genoeg te doen op een dag?

Mobiliteits adaptatie strategieën

- [*Control/ WHO Autonomy/ SOC*] In hoeverre ervaart u dat u kunt doen en laten wat u wilt, zowel binnen- als buitenshuis tijdens quarantaine?
- Heeft u hulp nodig in deze periode?
 - Van uw kinderen of de burens of vrienden? Waarvoor?
 - Hoe voelt u zich daarbij?
- [*SOC*] Zijn er activiteiten die u vaak onderneemt, maar dat nu op een andere manier doet? Hoe? Of kunt u specifieke activiteiten helemaal niet meer doen? Doet u daarvoor andere activiteiten in de plaats?

Over uw contact met andere mensen

- [*SOC/ WHO social relationships*] Met wie heeft u contact tijdens deze maatregelen?
 - Hoe maakt u contact? (bijvoorbeeld door te bellen, berichten versturen via whatsapp of sms, door het raam naar buiten praten met buurman, in de tuin met 1,5 m afstand)
 - *Wanneer relevant:* We weten dat u betrokken bent bij [*organisatie / groep / netwerk*]. In hoeverre bent u nu actief voor deze organisatie(s)? Hoe?
- [*SOC/ WHO Social relationships*] Zijn er mensen die u vaak ziet, maar niet in de afgelopen tijd tijdens de ingang van de maatregelen? Waarom nu niet? Hoe is dit voor u?
- [*Withdrawnness*] Heeft u over het algemeen het gevoel goed contact te kunnen maken met de buitenwereld? Waarom wel of niet?

Kwaliteit van leven

[Physical]

- Zie 'Over uw dagelijkse activiteiten tijdens de quarantaine'

[Environment]

- Hoe vindt u het om zo thuis te zijn?
- Heeft u veranderingen aangebracht in uw huis om het thuis blijven prettiger te maken?
- Zijn er plekken waarvan u heeft aangegeven dat u graag komt, zoals [*noem plekken uit activiteiten dagboek*], en daar nog steeds komt? Zo ja, welke plek(ken)?
 - Waarom? Hoe komt u daar? En met wie?
- En zijn er ook plekken waarvan u heeft aangegeven dat u graag komt maar daar tijdens de maatregelen niet meer komt? Zo ja, welke plek(ken)?
 - Waarom?
- Zijn er plekken die u op dit moment expres vermijdt? Zo ja, welke plek(ken)? Waarom?

[Social]

- Is uw relatie met [*de persoon waarmee de participant in lockdown zit*] veranderd sinds de maatregelen?

[Psychological]

- Kunt u zich goed concentreren?
- Heeft u genoeg ruimte en tijd voor uzelf in deze situatie?
- Hoe is uw gemoedstoestand afgelopen weken geweest?
 - Wat doet u om hiermee om te kunnen gaan?

Afronden

Als u nadenkt over ons gesprek,

- Wat is de belangrijkste impact van de maatregelen en het virus op uw leven?
- Zitten er positieve kanten aan de maatregelen voor u? Waarom wel/niet?
- Zitten er negatieve kanten aan de maatregelen voor u? Waarom wel/niet?
- Is er iets wat we nog niet hebben besproken, maar wat u nog graag wilt vertellen?

Appendix 2. Code book

Code	Type	Definition
Mobility adaptation strategies		
Selection	Processes in which an individual is transforming his/her goals and expectations to maintain certain level of satisfaction and personal control.	
Alternative activities	Inductive	Performing alternative activities, can be new activities or performance of old hobbies. Also, the exploitation of activities already part of the participant's activities of daily living.
Changing goals	Deductive	The modification, transformation, or redirection of goals.
Reducing activity	Deductive	Reducing activity is ranging from performing an activity less often, for a shorter duration or over more circumscribed space.
Stop activity	Deductive	Activity stopped due to measures or stopped because participants do not want to pursue the activity anymore.
Optimization	The augment and enrichment of existing reserves, resources, and functions to continue performing activities without new means.	
Anticipatory planning	Deductive	Planning strategies involved participants either consolidating or spreading out their activities.
Balancing the tensions	Deductive	Efforts to balance the tensions between taking risks and preserving safety.
Pushing self	Deductive	Pushing the self to capacity or beyond.
Changing environments	Deductive	Changing between environments or make changes within the environment
Relying on previous routines/organizational strategies	Inductive	Relying on routines or strategies from the pre-COVID-19 period
Compensation	When an individual is able to continue performing their goals, but with new means to reach their goal	
Substituting	Deductive	Substitution with alternative modes of mobility or alternative mobility practices.
Modifying	Deductive	Modifications were purposeful, calculated appraisals of situations to allow continuity in activities and involved minor and major adjustments.
Receiving help	Deductive	Ranging from the acceptance of paid or unpaid help which is self-initiated or offered by others.
Offering support	Deductive	Offering support/help to others.
Quality of life		
Environment		
Financial resources	Deductive	Discussions around finances, money, and the ability to fund oneself.
Home environment	Deductive	Discussion around the home (inside and outside)
Physical environment	Deductive	Discussions around the environment outside the home
Recreation and leisure	Deductive	Discussions on the leisure and recreational activities the participants are doing
Level of independence		
Activities of daily living	Deductive	Getting basic necessities for daily living (e.g. groceries)

Medication and healthcare	Deductive	Getting/receiving medical care and/or impact on daily life
Working capacity	Deductive	The participant's ability to work/volunteer/'be productive'
Self-sufficiency	Deductive	The ability to do daily activities for oneself
Physical health		
Energy & fatigue	Deductive	Whether (or not) the participant has enough energy for activities
Pain & discomfort	Deductive	Whether (or not) the participant is experiencing physical pain or discomfort
Sleep & rest	Deductive	Whether (or not) the participant is feeling rested and getting enough sleep
Psychological health		
Negative feelings	Deductive	Self-explanatory. E.g. fear, grief, loneliness
Positive feelings	Deductive	Self-explanatory. E.g. happiness, solidarity
Thinking, learning, memory & concentration	Deductive	Self-explanatory. E.g. Being able to concentrate and learn new things.
Deterioration of health	Inductive	Psychologically coping with deterioration of health conditions. Self, partner or close friends or family.
Social relations		
Family relationships	Deductive	Social contact/connections with family members
Friends relationships	Deductive	Social contact/connections with friends
Community relationships	Deductive	Social contact/connections in the broader community (e.g. neighbours, people in shops)
Social support	Deductive	Support and help given to/from the participant
Activity/group relationships	Deductive	Social contact/connections with organisations, activities, or groups